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LECTURES ON SURGERY, MEDICAL AND OPERATIVE,

DELIVERED AT

St. Bartholomew's Hospital;

BY MR. LAWRENCE.

LECTURE LXXIII.

Diseases of the Eye, concluded.—Impaired or lost Vision; Artificial Pupil; Operation for Artificial Pupil; Accidents to the Eye, embracing the introduction of extraneous Substances and Wounds; Affections of the Lachrymal Parts; Treatment.—Malignant Diseases, and Extirpation of the Globe.

Impaired or lost Vision.—Vision may be impaired, or lost, in consequence of changes in the eye, which obstruct, or entirely prevent, the transmission of light through the pupil; these changes may sometimes be remedied by an operation, which has for its object either the formation of an entirely new pupil, through which the rays of light can pass into the interior of the eye, or the enlargment of the original opening when in a contracted state; either of these operations is called the operation for making an

Artificial Pupil.—The pupil may be closed, or it may be greatly contracted, or its aperture may be obstructed by an adventitious membrane formed by the organisation of lymph, effused in consequence of inflammation attacking the eye. These changes may be produced by inflammation following the operation of extraction of cataract, or, indeed, by any of the operations that are performed for its removal; or they may be produced in consequence of iritis, whether idiopathic, or syphilitic, or arthritic. Again; the pupil may be contracted, altered in its figure, changed in its position, drawn out of its natural place, in consequence of prolapsus of the iris, either by a wound of the cornea, or by an aperture made in consequence of ulceration of the cornea. If a wound, or ulcer, be situated near the centre of the cornea, you may have a portion of the iris so protruded that the pupil may be completely closed; or, if the ulcer be situated near the circumference, it may draw it down; and if the prolapsus contain a part of the pupil, it will cause considerable diminution in size, as well as change in its form.

Adhesion of the iris to the cornea, which is technically called *synechia anterior*, is generally attended with an alteration in the size, position, and figure of the pupil; and in this case, when the iris has become adherent to the cornea, in consequence of inflammation, or the pupil has been drawn out of its place by prolapsus, it very generally happens that the cornea is attacked with opacity at the same time, and the opaque part of the cornea more or less covers the pupil. The same cause which produces adhesion of the cornea to the iris, or protrusion, also causes opacity of the cornea itself, which opacity is generally situated just at the part where those changes take place, so that, although there may be a sufficient opening, that opening is rendered nearly useless in consequence of the opacity. Such then are the changes in the eye which prevent the passage of light through the pupil, and require the formation of an artificial pupil. This operation can be undertaken with a reasonable prospect of success only when the changes in the condition of the pupil are the sole alterations which the eye has undergone, the rest of the organ being in a sound state, and more particularly when the retina retains its natural sensibility. Unless the retina be capable of receiving impressions from the rays of light, it would answer no purpose to make a new opening in the iris for the purpose of forming an artificial pupil; you must, therefore, first examine carefully whether the retina is perfectly sensible. Although the aperture of the pupil should be closed with a dense adventitious membrane, still a sufficient quantity of light will pass through it to make an impression on the retina, and to enable the individual to perceive the difference between light and darkness. In individuals, therefore, that have

no clear perception between light and darkness, the operation for artificial pupil would be inadmissible. It is also necessary that the iris should retain its natural structure. The structure of the iris becomes altered by inflammation; lymph is deposited in its interstices; it loses its natural colour; the usual delicacy and texture of its fibres becomes lost, and its substance is thickened. These changes are, in a great measure, remediable by proper treatment, when you have succeeded in putting a stop to the inflammatory affection; but, in some cases, they proceed so far that you cannot arrest them, although the iritis is removed, and the iris continues so far changed in structure that you would be unable to perform the operation for an artificial pupil.

The Operation.—This operation consists in cutting a hole in the iris—making a division in its texture; and, in order that it should succeed, it is necessary that the iris should so far possess its natural powers of retraction as to draw aside the opening you make. Now, if the iris be preternaturally changed, if it be thickened by the deposition that has taken place into its substance, the operation would not succeed; you might make an incision through the iris; but that incision would remain a mere line; the iris would not retract so as to convert the linear incision into an opening of some size.

The evidence of the iris being in its natural state will be afforded by its retaining its proper colour; this may be ascertained by comparing it with the sound eye, where the peculiar fibrous structure, which distinguishes its anterior surface, will be very apparent. If, therefore, it is found to be changed up to the ciliary margin, and its fibrous texture is obliterated, there will be great doubt whether you can succeed in making an artificial opening. The two circumstances, therefore, requisite for the performance of the operation, are a natural condition of the retina, at all events such as enables the patient to distinguish between light and darkness, and a natural state of the structure of the iris.

The conditions of the eye in which the operation is applicable are very numerous. The state of the pupil, the circumstance of its being filled, or not, by an opaque adventitious substance, the condition of the cornea, the question whether the iris has been prolapsed, and, consequently, whether the pupil remains in its natural position—these are circumstances which produce such a variety in the details of each case, that you may almost say every individual instance presents something peculiar; and it is hardly possible, therefore, to bring them all to your notice in a general description; hence there have been a great number of operations proposed in cases requiring the making of an artificial pupil; there are about three heads, however, to which those operations are referable. It would be of no use to attempt to describe all the operations proposed; they are by far too numerous for any general description.

The first attempt consisted in detaching a portion of the circumference of the iris from the ciliary body. The iris is fixed, by its external circumference, to that part which is called the *corpus ciliare*. If you expose the iris by cutting through the cornea, and draw it with a pair of forceps, you will find that it will give way at the part where its greatest circumference is attached to the point between the cornea and sclerotic coat. Now it was observed, in cases where a blow was inflicted on the eye, that the iris became partially separated in that situation, and that thus a new pupillary opening was formed, the original pupil becoming nearly closed, in consequence of the sides of the opening falling nearly together, when the circumference of the iris was detached. In some such cases the individual was able to see through this new pupillary aperture, and hence arose the notion, that by making a new opening, by separating the iris from its ciliary attachment, the patient might be able to see. This method has been found, however, not to answer the purpose, and has, therefore, been abandoned; for although an opening may be made in this way, the sides of it are found to approximate afterwards; that is, the iris gradually regains its position, and the artificial pupil by this operation is not permanent.

Another mode has consisted in making a division of the iris by a cutting instrument, and this has been called by the German writers, *corotomia*; *coro* means iris or pupil, and *tomia* means incision, therefore, of the iris. If the pupil be closed, the cornea transparent, and the anterior chamber in its natural state, you will find that the fibres of the iris are on the stretch; therefore if you make a plain cut through the iris in any direction, the margins of that incision retract after the incision has been made; an opening of considerable magnitude is thus formed in the iris. This is a mode particularly applicable in cases in which there is no crystalline lens; in cases, for instance, that occur after operations for cataract. Now different modes have been adopted for making this artificial aperture; there was a mode proposed by the late Sir William Adams, which consisted in employing a very narrow knife, hardly larger than a cataract needle, called an iris-scalpel. The one I now show you is about twice as large as is necessary. This instrument is introduced through the coats of the eye be-

hind the iris, in the situation in which you introduce the needle in depressing the cataract; it is then carried through the iris into the anterior chamber on the temporal side of the eye, and being placed just in front of the iris, is gently drawn back by a sort of counter motion, so as to cut through the fibres of the iris. Such is the operation of incision for an artificial pupil, called the operation of corotomia. We will suppose what I am now drawing [*making a diagram on a board with chalk*] to represent the iris with a closed pupil. Now, in this mode of operating, a transverse incision would be made through the middle of the iris, that would, at the time of making it, be a simple incision; but then you would find that the edges of the iris (the fibres being on the stretch) would retract, so that, after a little wound of this sort, the opening would present something like the figure I now show you. The retraction of the edges of the iris would make an aperture of considerable size. This operation would answer equally well if the incision were made perpendicularly, instead of transversely, for then the edges of the iris would retract, so as to give the opening in the pupil this shape. In this book (which is the work of Sir William Adams containing the proposal for the operation), there is the representation of an eye on which the operation was performed. This [*referring to the drawings*] is the very contracted pupil, as it was before the operation was performed, and that is the size of the opening after the incision into the iris.

I should mention to you, that this iris-scalpel can now be so made by a dexterous instrument-maker, that it shall not be larger in size than an ordinary cataract-needle, and, consequently, the wound we make in pushing it into the eye, is not greater than that created in the operation of depression.

Another plan of making this incision in the iris has consisted in the employment of a very minute pair of scissors, a pair not much larger than an ordinary probe; the mode of performing the operation with these consists in making a small opening in the cornea near to its circumference, just as you would do in the extraction of the cataract, excepting that it need not be so large. Of the two blades of these scissors, one has a probe-point, and the other a sharp point; when you have made the opening through the cornea into the anterior chamber, you pass the sharp point of the instrument directly through the iris near its ciliary or greater circumference; the probe-point passes under the edge of the cornea, and it is carried on for some distance; you then divide the iris by closing the blades. Such is the mode of making an incision with the scissors, instead of the iris-scalpel. Both these operations are applicable only to cases in which the fibres of the iris are on the stretch, and where the cornea remains transparent.

Now there are other cases in which a considerable portion of the cornea is opaque, the central part, we will say, is opaque, and in that state, which is called leucoma, the circumference remaining transparent, the opaque part completely covers the pupillary aperture; yet the circumference of the cornea being transparent, if you could make an opening in the iris opposite to that transparency, the patient might recover vision. This is accomplished by another kind of operation, which is called *excision of the iris*—where you cut out a piece of the iris; it is called by the Germans *corectomia*—excision. It consists in making a small opening through the cornea at its circumference, close to its connexion with the sclerotica, making pressure of the eye, so as to cause prolapsus of the iris, and then seizing it and cutting out a little bit of the iris. You may then lay hold of the portion of the iris that is prolapsed, with a pair of forceps of the kind I now show you (forceps consisting of a double hook), or by an ordinary pair of forceps,—a pair of minute forceps, and cut it off with any small pair of scissors. This was a plan proposed by Mr. Gibson, of Manchester, and there is a case in his work illustrating the different parts of the process. These represent artificial pupils so made.

Now, such are the three modes by which the artificial opening may be accomplished. You sometimes find that the iris cannot be squeezed out, or made to prolapse through an opening created in this manner, and you therefore introduce a minute hook into the eye, with which you draw out a little of the iris; or you may employ a double hook. There is an instrument consisting of a double hook; that is, it has two small hooks attached to the ends of something like a pair of forceps, but which, when you press the instrument together, forms a single hook; you can introduce this into the eye, and on opening it you can take a double hold; a single hook might perhaps tear through the iris. If you come to look into works on subjects of this kind, you will find a number of minutiæ described, which it is not necessary for me to enter upon now. I merely attempt at present to lay before you the general mode of proceeding; you must yourselves adapt the operative process in each case to the exact circumstances of that case. By one or the other mode of proceeding I have mentioned, or by some modification of it, you will be able to make a new aperture in the iris, in any instance in which the operation may be required.

I should observe to you, respecting the

operation for an artificial pupil, that the question respecting the proceeding arises only in cases where the eyes have suffered considerably from previous inflammation. It seldom happens, therefore, that the change in the condition of the pupil, which prevents the transmission of light through it, is the sole change that the eye has undergone; frequently there are other extensive and important changes of the organ, which render the success of the operation very doubtful. In many cases, therefore, the operation is attempted and undertaken with but slender hope. If, however, the patient cannot see at all, and you conceive that there is even a distant prospect of success, it may be better to make an attempt to relieve him, than to leave him in hopeless blindness. In cases where the edges of the pupil are not completely fixed, either by adhesion or other change which the parts have undergone, it would be expedient, before you attempt the operation for an artificial pupil, to apply belladonna to the eye, to see whether you can improve sight by a partial enlargement of the opening. The action of the belladonna does not require that the whole of the edge of the pupil should be free from adhesion; if a small portion of the pupil be unadherent, the belladonna will enlarge the pupil at that place; say that a quarter of the circumference of the aperture is unadherent, it may enlarge the pupil in that situation, though the other three-fourths continue fixed; and if it should so enlarge it as to bring it within the sphere of the transparent cornea, you may find that the belladonna will give all the relief that can be afforded by a new pupil. It is necessary, therefore, to try this first; and I may observe, that where you use the belladonna, whether it be a case of cataract, or one of contracted pupil, or one in which the pupil is partially covered by an opaque cornea, if the pupil be so enlarged as to admit the rays of light to pass through it, which they will not do in its contracted condition, it is not necessary to resort to the operation; the patient can obtain the assistance required by the action of the belladonna. The peculiar effect which the belladonna produces on the eye is continued as long as it can be employed, the effect of the substance not being lost by frequent use. In this case the external employment of the belladonna does not resemble the internal effect produced by it and other narcotics; these lose their influence in the course of time, but the belladonna produces the dilatation just as well at the end of many years as it does at the commencement. I have known a gentleman use belladonna for twelve or fourteen years in this way, and the application at the end of that time enlarged the pupil just as well as it did at the beginning; there was apparently no weakening or diminution of its influence by the continued use of it throughout so long a time.

It is necessary to employ the same precautions in preparing the patient for the operation for an artificial pupil, and to pay the same attention to his condition, both before and after the operation, as are necessary in the operation for cataract. And I should observe further, that whatever process you employ for making an artificial pupil, it will be necessary to make the opening as large as you can. In all these cases there is a disposition in the opening to contract afterwards, and, consequently, although you may make an opening which is very large at the time, you will find ultimately that it is no larger than is required; whereas if you make it just as large as it may appear to be necessary, it will probably in the course of time become less so; make it, therefore, as large as possible in the first instance.

Accidents to the Eye.—The subject of accidents to the eye, embracing the introduction of extraneous substances into the organ, and the *wounds* which may be inflicted on the globe of the eye, I have not yet mentioned. It is very common for various minute substances to pass between the eyelids, and to get in contact with the external surface of the globe, or to adhere to the internal surface of the eyelids, in both cases causing great pain by the mechanical friction produced by the various motions of the eye and eyelids. By drawing down the under eyelid, and directing the patient to look upwards, you may easily examine the state of it and of the inferior half of the eye, and ascertain whether any extraneous substance is there. By elevating the upper eyelid, and directing the patient to look downwards, you can bring to view the superior half of the globe; but in order to ascertain the state of the upper eyelid it is necessary to invert it. This is the more necessary where the substances have passed into the eye, as in most instances they become entangled in the upper eyelid. You would at first hardly believe how great an inconvenience is experienced from the lodgment of a minute particle of dust beneath the upper eyelid; it adheres to the mucous surface of the lid, and every time the eyelid moves, the foreign substance rubs against the sensitive cornea, and produces the greatest pain; indeed, if the patient be not relieved he gets no rest at night, and a considerable degree of inflammation comes on. In nine cases out of ten, when dust blows into the eye, and the patient continues to be troubled by it, you will find that it is lodged under the upper eyelid; in order to detach it, all you have to do is to invert the eyelid, so as to get a view of its mucous or internal surface: take the ciliary

margin of the eyelid between your finger and thumb, draw the eyelid downwards and forwards away from the eye, and with the end of a probe make pressure against the upper part of the lid; then carry the ciliary margin backwards over the end of the probe, and completely expose the mucous lining; and you will see perhaps, on the surface, a little black speck about the size of the point of a pin; take that off with a probe and the patient is immediately relieved. The minute black speck is sometimes so small that unless you have had an opportunity of witnessing its effect you would hardly believe it could produce so much inconvenience.

Sometimes an extraneous substance of larger size may pass between the eyelids, and rest on the angle of the reflection of the conjunctiva that lines the eyelids and that portion which is continued over the globe of the eye. From its situation, when once you have ascertained that any foreign substance is placed there, it can easily be removed.

Extraneous substances sometimes rest on the surface of the cornea, and produce nearly the same inconvenience upon motion as if they were attached to the under surface of the upper lid, though not quite so great pain, as the under surface of the eyelid is not so sensitive as the anterior surface of the cornea; when the substance rests on the cornea the irritation takes place on the under surface of the palpebra, but when the substance rests on the under surface of the eyelid, irritation of the cornea takes place. Extraneous substances lodged on the cornea chiefly consist of pieces of metal thrown off by smiths and other workers of metal; they are generally applied in an ignited state and with considerable force, so that they do not always rest on the surface of the cornea, but sometimes sink into and become impacted in its texture. You may see a small brownish speck on the surface of the cornea not larger than the point of a pin; it is expedient to detach it if you can, for if it be allowed to remain it will excite inflammation of the cornea,—sometimes a pretty active external inflammation of the eye. You cannot, however, separate this speck by the end of a probe: it adheres much too firmly. You will detach it most easily by means of a cataract needle. You get the patient into a good light, separate the lids with your fingers and direct the patient to look attentively and steadily at any object before the eye; you thus have a clear view of the extraneous substance. When you do this, by the end of a cataract needle you may lift the substance out of its situation; sometimes, however, it is done only with great difficulty.

Penetrating Wounds of the Globe of the Eye.—are attended with great risk of serious inflammation of the organ. In the operation for cataract, whether by extraction or depression, we inflict a penetrating wound upon the globe, but there we employ instruments of the most delicate kind, and extremely sharp, so that they wound the organ with very little violence. We employ them, or at least, we ought to employ them, in such a manner as to inflict the wound very gently, and we operate on patients carefully prepared by previous attention to diet and other matters. Yet under all these advantages we frequently find that these wounds produce violent inflammation; inflammation, in fact, which entirely frustrates the object of the operation. We need not, therefore, be surprised that ordinary wounds inflicted by blunt, rough, coarse substances, with considerable violence, attended with laceration and contusion of the parts, and taking place in individuals who have by no means been prepared for such an injury—we need not wonder that these wounds are attended with very serious inflammation of the eye, in many instances destroying the powers of the organ.

Penetrating wounds of the eye in general require a very active antiphlogistic treatment, together with absolute rest of the eye, absolute rest of the body, and low diet; that is with all the auxiliary circumstances that can conduce to lessen inflammation or prevent its occurrence. Blood should be freely taken from the arm, more particularly in young and strong individuals; leeches should be applied in considerable numbers round the organ; these means are to be continued until all fear of inflammation from the wound is removed. This kind of treatment applies to all instances in which a wound has penetrated the cornea or sclerotic coat, and, *a fortiori*, if it go deeper, that is to say, if it reach the iris, the crystalline capsule, and lens, if it should go through the choroid coat and retina as well as the sclerotic coat, it is, obviously, indispensably necessary. Indeed in all such cases you may consider yourself very fortunate if you save vision even with the adoption of the active treatment I have pointed out, but if you do not employ it, you may be sure sight will be lost.

In penetrating wounds of the eye it sometimes happens that blood is effused either into the anterior or posterior chambers, or into both. If the iris should be detached from the ciliary ligament for instance, blood will flow and fill the anterior chamber. If blood be effused behind the iris into the posterior chamber, the case is still more serious, for that must happen by the rupture of some vessels of the tunics—either of the iris, of the choroid coat, or of the retina. The mere presence of blood either in the posterior or anterior chamber, is of no great consequence in itself, for it will be absorbed. If you should have the chambers completely filled with blood, it will still be removed: but

then the presence of blood in the chambers of the eye shows that an injury has been offered to the interior part which is likely to be serious in other respects; and there is one mode by which such violence is likely to be very dangerous; it induces congestion of the retina, and impairs the function of the organ in the same manner as a violent blow on the head will produce impairment of the functions of the sensorium. You know that a very violent blow on the head without any actual laceration, by producing concussion (a thing which we do not very well understand) may entirely suspend the functions of the sensorium or very materially impair them; in the same way a blow on the eye which does not penetrate through the external tunics, the infliction of a wound which does not apparently injure any important part, may create an entirely new condition, may produce actual amaurosis, from which state recovery never takes place, by congestion of the retina only. In any case where an injury of the globe is attended with effusion of blood, particularly into the posterior chamber, it will generally happen that there is at the same time injury of the retina, and that the patient's vision is very seriously impaired. When an injury of the globe of the eye is attended immediately after its occurrence with great diminution of vision or entire loss of sight, the prognosis is very unfavourable. It may happen that by active treatment, by keeping the organ at rest, by employing those means which are calculated to prevent the occurrence of inflammation, the functions of the retina may be slowly restored, as are the functions of the sensorium after compression; but in a great number of cases the loss of vision is permanent, and we do not succeed in restoring vision when amaurotic blindness has been produced in a decided manner immediately after the occurrence of the injury.

Affections of the Lachrymal Gland and Passages.—The lachrymal parts of the eye are liable to some disease.

The lachrymal gland, like other parts of a similar texture, is very seldom diseased. I have never seen it in a state of actual inflammation, but I have had a few opportunities of seeing chronic enlargement of it, with change of structure,—of seeing it slowly enlarged in size, so as to cause protrusion of the eye from the orbit, the nature of the affection being indicated by the development of a tumour, and by the projection of that tumour externally, in the situation which we know to be occupied by the lachrymal gland, and by a pushing of the eye downwards and inwards. I have removed the lachrymal gland under such circumstances, and have found it enlarged, perhaps, to the size of the last joint of my thumb; hardened in its texture, but not exhibiting that form which should properly be called *scirrhus*. In fact, in the instances in which I have performed this operation, it has been clear, that although the lachrymal gland has been very much diseased, and, although the tumour, that is the enlarged gland, has possessed considerable firmness, yet that there has been nothing malignant in its nature. The removal of the gland has been perfectly successful.

The most common affection of the lachrymal organs is inflammation, either acute or chronic, of the lachrymal sac. The lachrymal sac, and the duct which conveys the tears from it into the nose, may be affected with acute inflammation, and at the same time a very sensible tumour forms in the internal angle of the eye; the mucous membrane of the sac becomes swelled by inflammation, and forms a firm tumour about the size of a horse bean. Great pain is experienced in this swelling. The tumefaction, which at first is formed in the internal angle of the eye, soon seems to spread to the lids, and then there is added to it a soft œdematous swelling of the palpebræ. The membranous lining of the sac and of the nasal duct becoming swelled by inflammation, and not being able to expand—being confined in bony canals—the tube through which the tears should pass into the nose is obstructed, and the passage of the tears is consequently suppressed, so that they flow over the lower eyelid down upon the cheek. In the more acute cases, the pain which the patient experiences is excessive; it is much greater than you would suppose possible, considering merely the extent of the mucous surface of the sac and nasal duct, for that is certainly inconsiderable; but, you must recollect, that these are very vascular, that they are confined in bony canals, and cannot give way; there is a sense of tension, and an acute pain which extends around the eye, and over the whole side of the head; the tumefaction of the lids consists, not only of complete closure of the eyes, but frequently this œdematous swelling occupies nearly the whole side of the face and head; the inflammation of the parts occupied by the swelling becomes very considerable, and the pain of the head is so great, that the patient is, not uncommonly, delirious at night; in fact, the local and general symptoms in cases of this kind (although the extent of the inflamed membrane is very trifling), are as considerable and alarming in appearance as if there were serious inflammation of the membranes of the brain. The passage of the tears, as I have mentioned to you, is suppressed, in consequence of the obstruction of the canal by the swelled state of the membrane. Where this inflammation takes place in the highest degree, suppuration will occur; the

lachrymal sac suppurates; matter forms and makes its way out at the corner of the eye; when the inflammatory tumefaction has become diminished, you will find a mixture of matter and mucus flowing out. This continues for a time; if the inflammation subside, the natural passage is restored, and the opening closes. In those instances which do not proceed to the formation of matter, the swelling in the internal angle of the eye subsides, and, after a time, a thick yellow fluid escapes through the puncta lachrymalia; the inflamed surface of the sac produces a puriform discharge, similar to that which is discharged from the eye in cases of inflammation, and after distending the sac, exudes through the puncta lachrymalia, more particularly if pressure be made with the finger on the surface of the sac. This is at first yellow; then it becomes thinner, and at last it has a transparent appearance: the passage of the tears is restored, and you have no longer escape of fluid through the puncta lachrymalia.

Treatment.—The treatment in this case must of course be antiphlogistic. In the more violent cases, active loss of blood is necessary,—the application of numerous leeches over the inflamed sac, and about the angle of the eye, with the adoption of other parts of the antiphlogistic treatment.

Sometimes, the inflammation goes into the chronic stage; the passage of the tears into the nose is not re-established; increased secretion takes place from the mucous membrane of the sac, distending the sac, flowing out through the puncta lachrymalia when pressure is made on the internal angle of the eye, and then they remain in a state,—the lachrymal sac, at least, is in a state—in which the patient experiences more or less inconvenience from this increased secretion, from the occasional more active inflammation to which it is subject, from the permanent flow of the tears over the lower eyelid, from which he generally endeavours to obtain relief by an operation for re-establishing the natural course of the tears. This state of chronic inflammation sometimes arises slowly, and without the previous occurrence of acute inflammation. A small swelling gradually takes place in the internal angle of the eye,—a swelling which is colourless, or, perhaps, but slightly coloured; and the eye waters; that is, the water flows down from the eye over the cheek, instead of going into the nose, its natural passage. Now in this state, perhaps, the patient experiences some pain in the angle of the eye; at all events, the eye feels weak, the vessels become distended; on using it, it will not bear exertion as in the natural state, and if the end of the finger be pressed on the small tumour that arises in the internal angle, there flows out through the puncta lachrymalia, either a thin yellowish fluid, or a viscid ropy semi-transparent fluid with yellowish streaks in it, or a clear fluid, partly of a watery description; the one or other of these fluids arises in consequence of greater or less inflammation of the sac. Sometimes, when the tumour is pressed on, it subsides, and no efflux takes place, except its flow through the nasal duct into the nose.

In the chronic inflammation of the lachrymal sac attended with this tumour, the first object is to remove inflammation, by leeches, and other such means. When this is accomplished, you will sometimes find that the natural course of the tears into the nose is re-established, for no doubt in all these cases, the obstruction of the tears into the nose arises simply from the inflammatory tumefaction of the membrane lining the nasal duct. If, however, the passage is not re-established, you may apply mild astringent lotions to the surface of the eye, or at least to the internal angle, where they will be taken up by the puncta lachrymalia and carried into the nasal duct; this sometimes has the effect of restoring the passage. A solution of alum, or of the sulphate of zinc, or of the nitrate of silver, will answer the purpose. If the course of the tears be not restored by the employment of these means, supposing all inflammation is removed, and that the patient experiences no inconvenience from inflammatory affection—that he merely suffers from occasional distention of the lachrymal sac, it will perhaps be best for him to submit to the inconvenience, as he can liberate himself from it by pressing the distended sac with his fingers once in the twelve or twenty-four hours. If, however, as sometimes happens, there be a permanent obstruction of the nasal duct, so that the tears will not pass down into the nose, and if inflammation be kept up in the sac, producing redness of the integuments covering it, giving rise to repeated inflammation of the integuments, and also to attacks of inflammation more or less severe of the mucous membrane—of the conjunctiva of the eye, then it becomes necessary to adopt some measures for permanently re-establishing the course of the tears. Various means have been had recourse to for this purpose, but I shall only mention that which is generally employed and most confided in; it consists in making an opening externally into the distended sac, with a sharp-pointed double-edged knife. The anatomical points which denote the situation of the sac are so clear, that there is no difficulty in making an opening into it. But the proceeding in question is rendered still more easy in these cases, in consequence of the distention of the sac pointing out the situation for the operation: you see a small swelling in the internal angle of the eye; you plunge a

knife into it; introduce a probe through the opening until it comes to the part where the passage is obstructed, and then force it into the nose; after that you take a piece of bougie, about three quarters of an inch in length, introduce it into the opening and leave it there, bending the extremity where it rests on the edge of the wound. After this has been in for two or three days, take it out and introduce a larger one, and when the opening is not sufficiently enlarged in this way, remove the bougie, and instead of it place in the sac and nasal duct, a kind of small silver probe with a black head, which has been called a *nail-headed stile*, and which remains in the internal angle of the eye. The instrument is contained in the lachrymal sac and duct, and although it would appear on first sight, that a piece of solid substance like this would prevent the tears from passing down through the duct, yet we find that in this case, as in that of an instrument in the urethra, the contracted part enlarges around it, and the tears find their way along it into the nose. The patient is obliged to wear it for a considerable time; it is not very safe to remove it, as there is a great disposition to a return of the disease in those parts. This is certainly the simplest and most effectual mode of proceeding for the relief of such patients.

Malignant Diseases and Extirpation of the Eye.—I shall just mention to you shortly the mode of *extirpating the eye* in cases requiring that proceeding. I have had occasion to mention, in speaking of cancer, fungus hæmatodes, and melanosis, that the globe of the eye is subject to those three affections. The eye is liable to cancer; that is, the globe of the eye may be converted into a scirrhous mass, in which all trace of the natural structure of the globe is lost. In case this change should be confined to the globe of the eye, and not extended to the eyelids, and should it also be loose, it may be expedient to give the patient the chance of relief by removing it. In the case of melanosis, that is, in the case of a conversion of the eye into a peculiar black texture, a substance of a sooty blackness, provided the change be confined just to the globe of the eye, that you can suppose the optic nerve is not involved in the disease, and have no evidence that any internal organ is affected,—you may also give to the patient the chance of the benefit of extirpation. In many cases where it has been performed early, the operation has been successful, and the life of the patient has been saved; if the operation be not performed, we know that the tendency of the complaint is to destroy life, and that it will go on to its destruction.

With respect to fungus hæmatodes, the case is different; even when the operation has been performed at the very earliest periods, the cases have invariably been unsuccessful; the disease has returned in this or some other organ of the body, so that where the eye has been removed, and where the newly deposited texture has been completely confined to the textures of the eye, relapse has taken place.

Now, the operation in any of the cases I have mentioned is very simple, and very easily performed. You want to obtain a complete exposure of the anterior surface of the eye, and the best mode of doing this is to slit up the external commissure of the eyelids, making the external opening between the eyelids about half an inch larger than natural, so that you can turn the eyelids out, and get the anterior surfaceof the globe completely exposed; then with the ordinary knife, the ordinary scalpel, you cut through the conjunctiva which passes from the upper eyelid to the globe, and continue dissecting close to the superior surface of the orbit, separating (which you very easily can) the loose cellular texture that exists between the globe of the eye and its parietes, until you have gone as far back as possible; you then proceed in the same way at the sides and below, so as to insulate the whole from the bony cavity; the diseased mass then remains connected only in the fundus of the orbit by the optic nerve and by the muscles, through both which you cut by an instrument passed in on the external side of the orbit; the external side slants inwards in an oblique manner, while the internal is nearly straight; you can easily carry in a curved knife, or a curved pair of scissors, on the external side, and cut through the optic nerve and muscles; the mass then comes out. All you have to observe in the dissection is, to carry the instrument closely in upon the surface of the bone, yet not so as to cut actually upon the surface of the bone, for you will recollect particularly, that the upper surface of the bone is very thin; that it might easily be punctured by the sharp end of the knife, and that if this accident occurred you would wound the dura mater. When you have thus removed the parts, you must just examine the under part with your finger, to satisfy yourself that you have removed the whole, and if you have left any part behind, take it out; be particularly careful to see that you have taken out the lachrymal gland; it is in a kind of hollow, and might easily be left behind if you were not particular in its removal. When the contents are removed for cancer or melanosis, you must take away the whole of the soft parts contained within the cavity of the orbit, the patient is not safe if you leave any part behind. After removing the general mass in the first place, see that you have

taken out the whole, by looking carefully over it, removing any fragment that may have been left behind. In cutting through the optic nerve and dividing the ophthalmic artery (which is of a considerable size, a large branch of the internal carotid), you will find that it bleeds very freely at the time. It is situated so deeply, that you cannot possibly tie it, and the patient generally loses a considerable quantity of blood; however, the bleeding generally stops spontaneously; it may, however, be necessary to stop the bleeding, and you must do that by compression; fold up a piece of lint of a conical figure, and pass it into the orbit, so that it will press against the bleeding orifice of the divided ophthalmic artery; after a certain length of time, remove it. Having thus taken away the contents of the organ, bring the flaps over the orbit, and confine them by a couple of sutures, where you have slit up the external commissure, then cover the part with a rag dipped in cold water. You must by no means think of doing that which is sometimes practised; that is, introducing lint or sponge into the cavity of the orbit. Some operators seem to think, that because they have made a large hole in the orbit, they ought to introduce something by way of filling it up again, but this cannot be of any possible service, while, like all other extraneous substances, it is very likely to excite inflammation. You will recollect, too, that the cavity of the organ is closely connected with the cavity of the cranium, that the fibrous membrane which lines the orbit is in immediate continuation with the dura mater, and thus that inflammation arising in the cavity of the orbit will invariably and necessarily extend itself into the cavity of the cranium; so that all means, both with respect to dressing and other treatment, are to be adopted, which are calculated to diminish the chance of the occurrence of inflammation.

Lecture LXXIV.

Affections of the Ear.—Ear-ache; Treatment.—Purulent Discharge; Treatment.—Polypus; Treatment.—Unnatural Ceruminous Secretions; Treatment.—Deafness from various causes.

The Tongue.—Wounds; Treatment.—Inflammation and Enlargement; Treatment.—Cancer; Treatment.—Ulceration and Tubercular Thickening; Treatment.—Tongue-tie.

Affections of the Organs of Mastication and Deglutition; Treatment.—Tumours, &c. of the Gums, Palate, &c.—Ranula; Treatment.—Salivary Glands.—Tonsils; Treatment.—Uvula.—Wounds of the Pharynx and Œsophagus.—Use of the Stomach Pump.—Use of the Probang.—Stricture of the Œsophagus.

The Ear.—The various parts of the organ of hearing are liable to an inflammatory affection, and the cases in which it occurs, are, from the severe pain which accompanies them, usually denominated cases of

Ear-ache; for partly in consequence of the firm unyielding nature of the textures, which are the seat of inflammation, and partly in consequence of their being contained in unyielding bony cavities, the pain and other local symptoms are extremely severe. When the inflammation is active, the pain and the determination of blood to the neighbouring parts of the head are very considerable, and the local disturbance is attended with serious constitutional sympathy, so that the sufferings of the patient, both as regards the local symptoms and the general indisposition, are much greater than you might expect, considering merely the extent and comparative importance of the affected parts. Inflammation seated in those textures may proceed to the formation of matter, which may find its way through some of the natural outlets, such as the meatus auditorius externus, or the eustachian tube; or it may come out by an artificial opening through the membrana tympani; or it may make its way through the mastoid cells and the integuments behind the ear. The inflammation thus produced, and the suppuration, may extend to the bony parts containing the membrane, and thus, caries of the tympanum, or of the mastoid cells, or of the petrous portion of the temporal bone, may be produced; this inflammation in the bones may extend to the membrane that lines parts of the ear, running to the dura mater itself, and thus occasion serious inflammatory mischief in the interior of the cranium. These cases, therefore, in their eventual termination, become more important than they appear in the first instance to be, merely as inflammations of the ear.

Treatment.—For the reasons I have mentioned, you will see the importance of very active antiphlogistic means. In the outset of the affection, indeed, copious depletion is necessary in many cases, simply as a measure for relieving the patient from excessive suffering, independently of its importance in putting a stop to the inflammation, which may proceed to the serious consequences I have just mentioned.

Purulent Discharge.—After inflammation arising in this way, you may have *puriform discharge* from the meatus auditorius externus: when this is connected with a diseased state of the bones, the matter discharged frequently possesses very offensive properties; it smells very badly. In other instances, the matter is discharged from the

meatus auditorius externus, arising apparently from a simple inflammatory affection of the lining of the meatus; it has then more of a mucous character; it sometimes also has offensive properties.

Treatment.—Whether the discharge arises from one or other of these sources, it is very difficult to be remedied. The discharge from the bones can of course only be removed with the disease itself; but even that which arises from inflammation of the mucous membrane, we find very difficult to remedy; the nature of the parts, and the connexion they have with other organs of importance, and the facility with which inflammation may be excited and communicated to them, render it very dangerous to employ any active means of an astringent or stimulating kind to stop the discharge. It is by no means uncommon to have discharge of either of these kinds from the meatus auditorius externus, more particularly in young subjects, going on for years without our being able very materially to check it. If it appear that the discharge simply proceeds from the inflammatory state of the lining of the meatus, there can be no objection to the injection of mild astringents or stimulants; but all these means should be employed very carefully, for you will find that in the majority of cases you cannot remove the affection; we deem it better, therefore, to allow the disease to proceed to the natural termination which puberty sometimes puts to it, rather than run the risk of exciting inflammation in those parts, or in the important organs connected with them.

Polypus.—The meatus auditorius externus is liable to the growth of polypi, very similar in their structure to the mucous polypi that occur in the nose; and they must be treated in the same way, that is, they must be drawn or torn out.

Unnatural Ceruminous Secretion.—The secretion of the ceruminous glands of the meatus sometimes fills it up and mechanically impedes the transmission of sound, producing, in the first place, imperfection in hearing, and, if the accumulation go on to a considerable extent, almost complete deafness, which, being merely mechanical, however, is removeable with the cause. You have no difficulty in determining the nature of the case; for, if you look into the ear, you see the accumulated ceruminous secretion. If the head be turned a little on one side, and you draw aside the external ear by laying hold of the tragus, you can see the whole length of the meatus down to the membrana tympani, and, consequently, you can very easily satisfy yourselves whether the meatus is filled by ceruminous secretion or not. When it is, you observe the accumulation to be nearly of the colour of a tamarind.

Treatment.—This source of inconvenience is relieved by employing a syringe and warm water. A small syringe is of no use; you must have a large one, which will enable you to throw in fluid with some force. Use simple warm water, throwing it in with a moderate degree of force in the first place, and increasing that force, if you find it necessary, in order to remove the accumulated matter.

Deafness from various Causes.—The causes of deafness are, in many instances, very obscure; sometimes, however, the nature of the cause is obvious. Persons very often suffer deafness in consequence of catarrh; that is, they become deaf, whenever they catch a cold. The mucous membrane of the throat becomes affected with catarrhal inflammation, which is propagated through the eustachian tube to the lining of the tympanum; or the orifice of the eustachian tube in the throat is the seat of catarrhal inflammation, and the tumefaction closes the origin of the tube; in either of these ways partial deafness is produced, depending on cold; but it ceases as soon as the cause is removed; when the inflammation of the mucous membrane subsides, the eustachian tube resumes its natural calibre, and the cause of deafness no longer exists.

A state of deafness may be produced by inflammation propagated along the eustachian tube to the lining of the tympanum, attended with more or less uneasiness in the ear, with symptoms that may require leeches and cupping behind the ear, and other antiphlogistic treatment, by which a stop is put to the affection.

Again, deafness is sometimes produced in consequence of chronic enlargement of the tonsils, which compresses the expanded orifice of the eustachian tube, and thus intercepts the communication between the tympanum and the external air. This is an imperfect kind of deafness; it is not permanent, and the degree varies according to the extent of the enlargement. Then there are numerous cases of deafness, in which the affection comes on insensibly, and in which, no doubt, it depends on changes of some of the complicated apparatus that constitutes the internal ear. Here we do not know which part of the apparatus is out of order, and we have no means of ascertaining the exact derangement. We are quite in the dark, therefore, as to the cause of the affection, and, consequently, are unable to apply any appropriate remedy. It may happen that the disorder may be such as to be attended with some obvious symptoms, symptoms of congestion about the ear, pain, symptoms of a character obviously requiring a certain kind of treatment, by the adoption

of which we can relieve the individual. But there are numerous cases of deafness where the affection comes on insensibly, where it is not attended with any marked symptoms, where the patient is not perhaps aware of any symptom whatever, until the hearing is lost on one side, and where we are at a loss to determine the cause. Under such circumstances we can have no rational remedy to apply. The number of individuals who have lost the hearing of one ear, who are deaf on one side, is very great. It is fortunate that there is not the same sympathetic connexion between the two ears that exists between the two eyes. If the sight of one eye be lost, there is a great risk that the sight of the other will become weakened, impaired, or even perhaps lost; but the loss of hearing in one ear is not attended with any risk to the other.

The Tongue.

Wounds of the tongue are sometimes attended with troublesome bleeding. The lingual artery is a vessel of considerable size, running on to the extremity of the tongue, and being of considerable magnitude even there. It happens sometimes, in consequence of fits, that the tongue is wounded by the teeth, and that bleeding takes place, which it is difficult to stop. I remember having had a child under my care, who had bitten very deeply into the substance of the tongue, just at the broadest portion of its loose under part; he had divided it horizontally, nearly in the middle line, and bleeding took place, which I found it impossible to restrain by any styptic application. I employed in vain the oil of turpentine, and a saturated solution of alum freely, and the child had lost so much blood, that I deemed it in danger if hæmorrhage continued or recurred. But at last I stopped the bleeding by the following measure, which, however, seems rather a rough one. I introduced at the basis of the loose part of the tongue, bringing it downwards, a strong needle armed with a ligature, and cutting the ligature off after I had brought the needle through, made two ligatures; I tied them tightly, one on each side, so as to embrace between the two the whole surface of the wound, including nearly half of the loose under part of the tongue. This stopped the hæmorrhage. I was rather apprehensive that by causing the loss of so much of the substance of the tongue, some bad effect might have been afterwards produced, but it was not, and the subsequent articulation of the child was perfect.

Inflammation and Enlargement.—The tongue is sometimes liable to inflammation, attended with a general swelling of its substance—a general inflammatory enlargement, which may proceed to such an extent, as to cause the tongue to project out of the mouth. The occurrence is not a very common one, but I have seen a few cases of it.

Treatment.—The most effectual mode of relieving the patient consists in making one or more incisions into the substance of the tongue, by means of which a free discharge of blood takes place, and the overloaded vessels are emptied; this is attended with a subsidence of the swelling, and relief from the great inconvenience and alarm which the circumstance occasions; the swelling having subsided, no more trouble is experienced.

Cancer.—The tongue is liable to cancerous affection. A scirrhous tumour forms in it which proceeds to ulceration. The character of the tumour originally is like that of scirrhous tumours in other parts of the body. It is a firm incompressible growth, and proceeds to an ulcer, having the marks of cancerous ulceration; that is, there is an excavation in the centre of the tumour, a hard rising edge, and an ichorous offensive discharge. This scirrhous affection is attended with disease of the absorbent glands connected with the tongue, and has the same tendency to destroy life which cancer has when situated in any other part of the body.

Treatment.—The only chance of arresting this affection is by the removal of the affected part before the absorbent glands become the seat of disease. If you do so after the glands have swelled, the disease returns. The situation and vascularity of the tongue hardly admit of your removing the tumour by the knife, and therefore in a case where you deem it expedient to proceed to this operation, you must employ the measure I have just mentioned, that of ligature—passing a strong ligature through the basis of the tumour, and tying the two portions of the ligature, one before and one behind the swelling, so as to embrace its whole basis. In a case where the affection is so confined that you can accomplish this, the glands not being affected, you may attempt this mode of relieving the patient with a fair prospect of success.

Ulceration and tubercular thickening.—There are other affections of the tongue, such as enlargement of its mucous membrane—tubercular thickening of it sometimes attended with ulceration; there are also superficial ulcerations without much enlargement; these latter are affections of an innocent kind, not malignant in their nature, and yield to ordinary treatment.

Treatment.—In the case of such affections you must, in the first place, regulate the diet of the patient, bring the stomach and bowels into a sound state, then perhaps administer a course of alterative mercurial medicine, with sarsaparilla, and mild aperi-

ents, and if the tongue do not get well then you may have recourse to mild astringents or escharotics—the solution of the nitrate of silver, and so on.

Tongue-tie.—We sometimes are consulted respecting children who are brought to us under the idea that they are *tongue-tied*. The child does not begin to speak so soon as the parents expected, and they fancy that this arises from the movements of the tongue being impeded by the small fold of membrane which is called the *frænum* of the tongue not being of sufficient length. I believe the cases are very rare in which the frænum is so short as to interfere with sucking, deglutition, or articulation. I will not venture to say there are no instances in which the frænum may not require to be divided, but I would observe they are extremely rare. If you find upon opening the mouth of the child that it moves the tongue, that it turns it round from side to side, and projects it from the mouth, you may be satisfied that any imperfection in its motion must arise from some other cause. This shortness, however, of the mucous membrane forming the frænum of the tongue is quite innocent and simple, and there is no danger in making a division. All you have to do is to fix the tongue, and with a small pair of scissors just to snip through the frænum.

Organs of Mastication and Deglutition.

Cancer of the Lips.—The *lips*, and particularly the lower one, are subject to cancer as well as the tongue. Cancer commences in the lip, either by the development of a scirrhous tumour in its substance, which proceeds to ulceration, or in the form of cancer affecting the skin, beginning with a tubercular thickening of the skin and proceeding also to ulceration; the latter is the more frequent form. It leads to a cancerous ulcer bearing the general characters of disease of that kind. It attacks the absorbent glands, and it contaminates the system; so that the termination of the affection when situated in the lip, if left to itself, is just as fatal as when it takes place in any other part of the body.

Treatment.—Here the only chance of effectual relief consists in the removal of the part in the early stage of the disease, and before the glands become diseased. The result of operations on the lip at that early period is tolerably favourable; perhaps more so than the result of similar operations in any other part of the body. The general mode of operating in this case has been to to isolate a portion of the lip by two perpendicular incisions, uniting at the lower part, so as to form the letter V. When the portion is taken out, the edges of the wound are brought together by hare-lip pins, just as after operating for hare-lip. Now, it has been observed by Baron Dupuytren, that it is not necessary to take out this triangular portion of the lip; that it will be sufficient if you merely shave off the diseased part by a horizontal incision. He says, that the scirrhous disease in those cases is not a diseased change of the substance of the lip itself, but that it is a new production developed in the lip, which pushes aside and condenses the original structure; that if you shave off this tumour, the original structure will swell out again, and the lip recover nearly its natural figure. At all events I can state to you, that the mode he recommends has advantages. I have removed a few cancerous affections of the lip in that way, and I have found that after the healing process has been complete the lip has regained nearly its natural form. The operation is much more simple when performed in that way, than if you make the incision in the manner I have mentioned. In the mode that has been proposed by Dupuytren, you make a curved horizontal incision, going around the boundary of the disease, observing merely that you carry your incision so as completely to remove the whole of the diseased part. If you defer operating in these cases until the absorbent glands are affected, the result is unfavourable; the patient perishes in consequence of the extension of the cancerous disease, just as the same event would occur when cancer is seated in the mammæ. It is also very important here, as in any other case of cancerous affection, to remove the whole of the diseased parts. The importance of taking away as little as you can help of the lip is very great, in consequence of the subsequent deformity that it will produce; but you must not allow that consideration to induce you to leave behind any part that is liable to suspicion. The object of your operating is to remove a disease which, if allowed to continue and proceed, must destroy life; it is much more important, therefore, to remove the whole that may, by possibility, be contaminated, than to spare the patient a slight deformity, in consequence of taking away a little less than you might deem necessary.

Tumours, &c., of the Gums, Palate, &c.—The gums and the palate sometimes give rise to tumours, which generally assume something of the fungoid character; these must be dealt with by the knife. You must cut away and remove the diseased part; and you find it generally necessary to combine with this a scraping away the basis of the structure from the surface of the bone, for, in the gums and palate, these tumours adhere so closely to the bones, that unless you scrape them you cannot be satisfied that the bases are taken away.

Ranula.—A tumour is sometimes seen in the interior of the mouth, to which the name of *ranula* is given. It is usually formed between the under surface of the tongue and jaw, and is said to arise from obstruction of the excretory ducts of the submaxillary and sublingual salivary glands. We find a tumour in the situation I have mentioned, which has a semi-transparent appearance, and which varies in size from an inconsiderable magnitude to a capacity of many ounces. If we puncture the tumour, there escapes from it a thick, transparent, viscid fluid, sometimes nearly as thin as the white of an egg, but in general much thicker, more gelatinous, and more viscid.

Treatment.—If you merely puncture such a tumour and let out its contents, the sides of the wound made by the puncture unite, and the tumour is reproduced. If you make an incision the whole length of the tumour, you will find that the same result ensues. You might suppose, that if you divided the whole length of the surface it would granulate, and no fresh secretion of jelly-like fluid would take place again; this is not, however, the case; and the only mode of dealing with such a tumour consists in making an incision in its whole length, and either dissecting away the external surface (that surface which is towards the mouth), or when you have made the incision, rubbing the surface over with lunar caustic. These tumours are of an indolent kind, and so long as they are inconsiderable in magnitude they cause no inconvenience; we are only required to operate on them when from their size they become inconvenient. Occasionally they obtain a very considerable magnitude indeed, and sometimes their contents are discharged in the way I have mentioned to you. A great many years ago a lady came from Canada, and placed herself under my care, in consequence of having a tumour situated under the tongue, which from its size pressed the tongue upwards towards the roof of the mouth, and occupied so large a space as to interfere considerably with deglutition and mastication, and also very materially with articulation. This tumour was sensibly felt on putting the finger into the mouth, under the tongue; it also projected under the edge of the jaw below. In the first instance I made an opening under the edge of the jaw, and there was evacuated a thin gelatinous fluid, containing particles of white opaque substance, in colour and appearance very much like boiled rice. This opening was closed and united; the tumour shortly regained its original size, and it was then deemed necessary to remove it. I made an incision, dissecting down to the surface of the cyst externally, and denuded as much of the cyst as I could, but I found that it extended among the muscles of the tongue, and that I could not possibly dissect out the whole of the cyst; I therefore took away as much of it as I could, and a large quantity of the surface was exposed. On then introducing the finger, I found that the cyst went quite back to the root of the tongue. When the wound, made by this operation, was healed, the patient seemed recovered from the inconvenience and swelling, but to my great mortification the swelling was soon gradually reproduced, and the patient had again the same sort of tumour as before. I found it necessary to repeat the operation; it was a very painful one, and after cutting away as much of the cyst as I could, I rubbed over the surface of the remaining part with the nitrate of silver, and, keeping open the wound, I injected the solution of the nitrate of silver into it, adopting all the other means I could of preventing a closing up of the wound and a return of the tumour; and this mode of proceeding was completely successful; no doubt the cyst granulated and was completely obliterated. In ranula, however, the proceeding adopted in the inside of the mouth is sufficient, that of first slitting up the surface of the tumour and applying the nitrate of silver, or a pretty strong solution of it, to the surface of the cyst.*

The Salivary Glands.—It sometimes happens that little calculous concretions form in the salivary ducts, particularly of the sublingual gland. I had occasion to take out one a short time ago, which was about the size of a small bean. The patient had suffered a great deal of inconvenience from it, and was not aware of the nature of the affection. I found there was a calculous substance protruding; I enlarged the duct and took it out.

Diseases of the salivary glands are very rare. One hardly knows of any instance in which they become enlarged or altered in structure, so as to require removal. I do not therefore profess to understand exactly what is meant by cases which have been called operations for the *extirpation of the parotid gland.* I should rather think they are operations for tumours that occur in the *neighbourhood* of the gland, and that the parotic gland itself is not removed. I can only say that I never saw a case in which the parotic gland was enlarged, or so altered in its structure, that it could be considered a case for removal. I do however recollect seeing one case where there was a hard scirrhous tumour which seemed to involve the parotid gland, but where the nature of the affection was such as entirely to pre-

* A small seton has lately been found efficacious in the treatment of ranula.

clude all idea of removing it. I should suppose it would be very difficult to remove the gland, inasmuch as it includes within itself the trunk and the branches of the carotid artery; I fancy I may say to you that it is an operation which you will never be called upon to perform.

The Tonsils.—The tonsils are liable to acute inflammation, which sometimes terminates in abscess; the swelling which is thus produced, frequently interferes with deglutition and respiration, in such a way as to alarm the patient excessively, and to make both him and his friends apprehensive of suffocation. But this is only a temporary alarm; the abscess gives way and the symptoms are relieved. Frequently, however, we can accelerate the breaking of the abscess by plunging a lancet into it and letting out the matter. Holding down the tongue look into the mouth, and if you see that the tonsil on one side is considerably swollen, is of a bright-red appearance, and exhibits a prominence such as is produced by the advance of matter to the surface, you may without any scruple, plunge the end of a sharp-pointed double-edged bistoury into the swelling, and give ease to the patient. Even if you should make a mistake as to the formation of matter, the mere making of a puncture into an inflamed tonsil would not be injurious.

The tonsils are frequently the seat of chronic enlargement; they acquire a greater bulk than is natural. This augmentation may become so considerable as to cause the two tonsils to meet at the entrance of the fauces, so that when you look into the throat you see that the entrance to the pharynx is completely obstructed. This is generally the result of repeated attacks of inflammation, and in an enlarged condition the tonsils are more liable to disease than in their natural state. Various inconveniences arise from this state; first, the liability to repeated inflammations; secondly, serious impediment to deglutition; thirdly, a very disagreeable change in the voice; and, fourthly, pressure on the eustachian tubes accompanied with more or less deafness. In cases of deafness in young subjects, it is always right for you to bear in mind the probability of this cause, and to inspect the throat before you determine on the case.

Treatment.—The ordinary means have but little effect in removing this chronic enlargement of the tonsils. You may give opening or alterative medicine, regulating the diet, or apply astringents, such as a solution of the sulphate of zinc, a solution of alum or of the nitrate of silver, or even the concentrated nitric acid, and yet you do not remove them. In instances where the tonsils have been inflamed for a considerable time, where they have acquired a considerable magnitude, and where any inconvenience has existed in a marked degree, I think the shortest way is to remove the enlarged tonsil, which is done very easily. Generally, it has been recommended to *tie* the tonsil: to convey a ligature over the basis of the tumour, and draw it tightly so as to stop the circulation, and so remove it. The operation, however, of tying a ligature around the basis of the tumour is not very easy, and the subsequent process is very tardy, while the operation by the knife is very speedy; it immediately relieves the patient, who hardly experiences any uneasiness afterwards. You take hold of the tonsil by a hook, a common tenaculum for instance, transfix the tonsil with it, having an assistant to hold down the tongue with the handle of a tablespoon, get a firm hold of it with the tenaculum, and then the catlin of a common amputating case will answer the purpose very well; roll lint round it so as not to leave above an inch or an inch and a half of the knife uncovered, then carry it backwards into the mouth, cut the tonsil through, and away it comes. In this way I have removed tonsils a great many times, and I never saw hæmorrhage of any consequence produced by the operation. The patient in many cases does not lose a tablespoonful of blood; the throat of course is a little sore for two or three days, but not so materially as to interfere with deglutition; the surface speedily granulates, and the operation very completely liberates the patient from inconvenience.

Uvula.—The *uvula* is sometimes enlarged and elongated. It hangs down, and produces considerable irritation and inconvenience, which, however, can be effectually removed by seizing the end of it with a pair of forceps, and snipping off a portion with a pair of scissors,—a very simple and effectual remedy.

Wounds of the Pharynx and Œsophagus.—These we do not very frequently have to treat, for wounds can hardly extend to those parts without involving others, particularly blood-vessels, which are so important as to settle the event of the case pretty completely. A difficulty arises in the case of wounds in these situations, as regards the conveyance of food into the stomach, and it has been recommended, under such circumstances, to feed the individual by means of a tube passed through the nose into the pharynx and œsophagus down to the stomach. I should think, that in the case of a wound in the pharynx and œsophagus, it would, perhaps, be better to trust the nutrition of the patient to food which can be introduced into the system *per anum*. You can nourish a person in this way for a considerable time; I do not know the exact limit, but, at all events, you can effectually nourish a person by nutrient glysters for a

fortnight or three weeks, and thus you can leave the parts about the throat, which may be the seat of the wound, completely at rest, to perform those natural processes which are necessary for the healing of it. I know of one instance, that of a young lady, in whom on account of some peculiar affection about the throat, which produced excessive spasms whenever an attempt was made to take food, in which nourishment was conveyed into the system *per anum* for six weeks; during which time she never swallowed either solid or fluid. It appears, therefore, that you may continue thus long in a case of urgent necessity to administer food in that manner.

Use of the Stomach Pump.—The introduction of food into the stomach, and the removal of substances from it, are now very easily accomplished through the mouth, by means of the machines called *stomach pumps*, which consist of a simple syringe, with an apparatus of tubes, both for injecting and for other purposes that are necessary in these cases. These tubes are not only very convenient and serviceable for the removal of poisonous matters from the stomach, or the introduction of such fluids into it as may be thought necessary to get rid of those poisons, but also to pass food into the stomach in instances where deranged persons refuse to take sustenance. Persons who are deranged, will sometimes not take food, they will obstinately refuse it for a considerable length of time, and it becomes necessary to nourish them by means of the stomach pump as the most convenient mode of accomplishing the purpose. In these cases, the pump is used by passing a tube through the mouth and not the nose. Although a tube may be passed through the nose in certain cases, (and I have repeatedly fed deranged people in that way,) yet, I find that the mouth is most convenient. You have a wooden gag on the tube, by which you can keep the teeth asunder, if you are acting contrary to the will of the individual. You may, however, if you choose, make the patient open the mouth? Put your fingers in at the sides of the mouth, and press towards the corner of the jaw, a very painful sensation is produced by this; just get your fingers into the mouth as far as the last teeth, and press upon the jaw there, the patient will then open his mouth, and you can introduce this tube between the teeth, protected by the gag; and through it you can push the tube down into the stomach. The syringe has two tubes, one called the *side*, and one called the *bottom* tube. Holding down the tongue with the finger, you carry this long elastic tube at the bottom, through the pharynx and œsophagus into the stomach; you then apply a small tube to the side called the side tube. Now, you observe, that the piston of this syringe (Weiss's) has an index to it, and on the tube are two letters, one *b*, and the other *s*; the index admits of being turned from *b* to *s* with the greatest facility. When the index is turned towards *b*, then the communication between the cavity of the syringe and the bottom tube is open, so that if you draw up the piston, you bring up any fluid that may be in the stomach; if you then turn the index towards the *s*, you will expel the fluid through the side tube by pushing down the piston again, and so you go on. On the other hand, if you wish to throw any thing into the stomach, you have only to put the index towards the *s*, then draw up the piston, and the fluid in which the side tube is immersed is drawn into the syringe; next turn the index round to *b*, push the piston down, and the fluid goes into the stomach. So that by means of this tube, you can either draw fluid up from the stomach and expel it, or you can throw it in and wash the stomach out; of course, in the same way you can use the instrument for the purpose of administering food, the patient having the long tube in the stomach, and the end of the short one in a bason containing milk, with the yolk of egg beaten up, broth, or any nutritient fluid. This is a very simple, and, at the same time, very effectual contrivance.

Use of the Probang.—Sometimes when persons in swallowing food have a portion of it stick in the throat, and find that it will not go down, it becomes necessary for you to push it down by the use of an instrument called the *probang*. A probang is a piece of whalebone with a bit of sponge at the end of it. Oil the instrument, push it into the mouth, and then downwards, until it arrives at the substance in the œsophagus, and then onwards, till you find you can drive it into the stomach. At the end of some of these instruments, there are little contrivances by which you may attempt to hook up bits of bone or other substances that may stick in the œsophagus; the operation is, however, rather uncertain.

Stricture of the Œsophagus.—The œsophagus is subject to stricture; the tube becomes narrow, particularly about the termination of the pharynx, where the œsophagus begins, and an impediment to the passage of food into the stomach is thus produced. The patient finds that food does not go down with the usual readiness; that solid substances cannot be swallowed at all—that he can only get down things that are soft, or fluids. You do not find that actual stricture exists in all cases in which sensations of this kind are experienced. There are cases where difficulty of swallowing, for want of a more precise term, is said to be *spasmodic*; that is, there are some persons that find a difficulty in swallowing, where no disease

of the nature of stricture exists. I am acquainted with an individual who sometimes (and for a considerable period) swallows with great difficulty. He sometimes finds, in the midst of dinner, that his food will not go down; he rises up from the table, and is obliged to leave the room; at other times he swallows as well as any other person. Now this condition has existed for four or five years, so that it cannot depend on any organic change; there is no stricture, nor any actual disease of the tube. There are cases, however, where stricture of the œsophagus exists, and produces the inconvenience I am alluding to. Sometimes this affection is of a scirrhous nature; it proceeds to ulceration, and all the series of changes attending that affection. In general I am not very friendly to the introduction of instruments for the purpose of enlarging these strictures of the œsophagus; the operation is painful, it is distressing to the individual, and is rather blind work. You meet with instances in which you cannot find out whether the inconvenience arises from stricture, or from something pressing against the surface of the tube. In some instances, however, we do find that temporary relief is afforded by the employment of the bougie. In cases, therefore, where attention has been paid to the diet—where soft articles of diet have been taken, easily chewed and easily swallowed—where attention to the general health has not been overlooked—in cases where all these means have been had recourse to without the affection being removed, you may proceed to the cautious use of the bougie.

Lecture LXXV.

Organs of Respiration.—Wounds of the Larynx and Trachea; Treatment.—Tracheotomy, Laryngotomy, Bronchotomy.—Suspended Respiration from hanging or drowning.

Male Organs of Generation.—Operation for Phimosis.—Cancer of the Penis.—Amputation of the Penis.

Female Organs of Generation.—Surgical Diseases of the Female Organs of Generation.—Prolapsus Uteri.—Polypus Uteri; Treatment.—Cancer.—Extirpation of the Uterus.—Extirpation of the Ovary.—Obscure Disease of the external Organs of Generation in Female Children; Treatment.

Wounds of the Larynx and Trachea.—Serious wounds of the throat are often produced in attempts to commit suicide, wounds in which the mere division of the soft parts is complicated with injury of important blood-vessels, which wounds are with or without entire division of the trachea or œsophagus.

Treatment.—The treatment of these cases is to be conducted according to the general principles I have mentioned to you. If blood-vessels be wounded, you must of course take the proper measures for arresting hæmorrhage; but the injuries of those vessels in some cases, are of such importance, that fatal hæmorrhage ensues before you can render any assistance. So far as the mere wound of the larynx or trachea goes, no essential difference is made in the treatment of the case; the same observation may be made with reference to a wound of the œsophagus; supposing that the trachea has been completely divided, and that the œsophagus has also received injury, the object, of course, is, to approximate the edges of the wound, and to keep them in contact, that the process of the union may go on; and this is chiefly to be accomplished by keeping the head and neck in a certain position. If the head be bent forwards on the neck, and the head and neck be kept bent forwards upon the chest, a wound, even of the most extensive nature, occurring on the anterior and upper part of the throat, will be placed in the most favourable state for the process of consolidation. The parts by these means are placed in a proper position for union, the edges being kept together, in fact, by the mere position, unaided by any other surgical treatment. It may be necessary,—more particularly if the patient be unruly and unwilling to submit to the restraint which his case requires (and that is particularly the case in instances of suicide),—it may be necessary to confine the parts in this position by bandages. This is accomplished by putting on a night-cap, and bringing a band round the head, and fastening it in front to another that goes round the chest, so that the head shall be kept forwards upon the chest. The exact apposition of the edges of the wound will be aided in these cases by the use of sutures carried through the integuments. It is not expedient to do what is sometimes recommended, that is, to approximate the edges of the trachea, if divided, by sutures. The patient cannot bear sutures in this place; or, at all events, if sutures were employed, it would be necessary only to put them through the external cartilaginous tube, and not to let them come on the mucous lining at all. In general, however, a wound of the trachea does not add very materially to the danger of the patient, though the entire division of the trachea does. In the first place, a wound accompanied with the entire division of the trachea will be very likely to injure other parts; and, in the next place, inconvenience in the process of respiration may be experienced, in consequence of the adjustment of

the two ends of the divided tube not being perfectly accurate, it is difficult to make it so.

We sometimes cut people's throats professionally, but then we give to the operation the better sounding term of *tracheotomy*, *laryngotomy*, *bronchotomy*. We make an opening into some part of the respiratory tube, for the purpose of liberating the patient from the distress which interruption of respiration produces. Whatever the cause which produces that impediment in breathing may be, we may make an opening into that part of the trachea that is immediately behind the larynx, by cutting in the interval between the cricoid and thyroid cartilages. There is, in that situation, a considerable space filled by a tough yellow ligament; we may make a transverse division through that ligament, and thus get such an opening as is necessary for respiration. More commonly, when making an opening into the respiratory tube, we perform a perpendicular division of the upper part, first through the skin and soft parts, and then through the cartilaginous rings immediately below the cricoid cartilage; in this way we procure an opening not only adequate to the purpose of respiration, but free enough for any purpose for which the operation of tracheotomy may be required. The circumstances that may require this operation are, first, the introduction of extraneous substances into the air-passages of the lungs; and, secondly, inflammation affecting certain parts of those passages, producing a temporary obstruction, or, indeed, impeding respiration in such a way as to threaten suffocation. Substances that pass into the throat sometimes get through the small aperture of the glottis, are admitted into the larynx, and pass down to the trachea. When this happens, excessive pain is produced in the throat, violent coughing comes on, and the difficulty of respiration produced by the pain and coughing amount often to impending suffocation. The patient has a paroxysm of excessive difficulty of breathing, with violent cough; he then perhaps becomes quiet again, the symptoms subside, and he is at rest; but this fit of difficult respiration and coughing is soon renewed, he is harassed by a repetition of them at short intervals, and life is, in many cases, in danger, simply from that circumstance. Sometimes, however, after a time, the paroxysms of coughing subside, and he seems to get tolerably quiet; the inconveniences, however, as to respiration are renewed from time to time, showing that the foreign substance still remains in the chest. In some instances there may be an interval of rest of some days, and then attacks of serious inflammation may come on—inflammation, in fact, of the lungs, terminating in the formation of an abscess, which may break into the trachea or some of its branches, and be discharged externally; it may loosen the foreign substance, and produce a favourable change; or, finally, the inflammation may be so serious as to be fatal to the patient. In cases, therefore, where the circumstances show us that a foreign substance has gained admission into the larynx, it is desirable, at an early period after the accident, to make an artificial opening into the trachea, and to give issue to it. Here our object must be to make a tolerably free opening, that the body may be forcibly expelled in one of those violent efforts of the respiratory organs which its presence produces. This is one of the cases in which the operation is necessary; but we are more frequently called upon to perform it in consequence of inflammation attacking either the larynx or the trachea. The case of inflammation attacking the larynx comes under the technical head of

Cynanche Laryngea; and the most important circumstances are, a swelled state of the epiglottis showing the existence of the inflammation—the extent to which it goes, the violent paroxysms of coughing that come on from time to time, and the peculiar sound which attends the passage of the air through the narrow rima glottidis into the lungs. The passage of the air through the rima glottidis is attended with a sound which manifestly shows that the air passes through an obstructed opening. The sound in many cases is so considerable, that the noise of respiration can be heard at a very great distance—a circumstance which, of course, could not take place, unless a great mechanical obstacle opposed the passage of the air into the lungs.

Under circumstances where the cases are accompanied with the symptoms which point out serious disorder in those parts, and where the repeated occurrence of paroxysms of coughing, with this noisy and peculiarly sounding respiration, have brought the patient into the greatest danger, it is expedient to give the relief which an artificial opening into the trachea affords; the patient is thus suddenly relieved from great danger, time is allowed for the inflammation of the epiglottis to subside, and the passage is got into a state fit for natural respiration. The operation is not one of great difficulty, nor is it generally, very important. We divide the integuments, the cellular and adipose substance—the veins that intervene between the trachea and the skin, and make an opening into the air-tube. You can hardly wound any part of consequence; or by any possibility have considerable bleeding during the operation. It is therefore, in doubtful cases, better to give the chance of benefit from this operation, than to allow the patient to

be suffocated in consequence of the continuance of the disorder.

The operation of tracheotomy has sometimes been performed in the case of *croup*; that peculiar inflammation of the trachea incidental to children, in which there is an effusion of lymph in the form of an adventitious membrane lining the trachea and its principal ramifications, producing, of course, great mechanical obstruction to respiration. Should the ordinary means of treating such an affection fail, I should say that the operation was very justifiable. If by the employment of local bleeding and the free administration of mercury, we have not succeeded in arresting the inflammation, rather than allow the child to perish we had better make an opening into the trachea. In some instances this has been successful under circumstances that were apparently desperate.

Suspended Respiration by Hanging and Drowning.—The operations that I have now mentioned are not necessary in the case of apparent death, which arises from suspended respiration in consequence of drowning or from hanging, or in whatever way respiration may be suspended for a time. In these cases the natural opening for the admission of air to and from the lungs still exists, it is not obstructed; its dimensions are not contracted; there is no reason, therefore, for making an artificial opening into it. In these cases all we want is to produce respiration. It is the interruption of respiration that causes the apparent death, and respiration can be renewed, so far as our efforts are equal to it, through the natural passages. We can introduce a tube into the nostril and impel air into the lungs according to the course which it takes in ordinary respiration. In doing this we must close the opposite nostril, or the air will pass out again, and we must compress the œsophagus against the anterior part of the vertebral column, for otherwise the air, instead of passing into the glottis and lungs, will go through the freer opening into the stomach. We may introduce a tube of any kind that may be at hand; the tube of a glyster-pipe, for instance, or any small silver tube—any pipe about three or four inches long will do for the purpose. We might introduce the nozzle of a pair of bellows into one nostril, and, pressing the other, gently impel air into the chest so as to produce a renewal of natural respiration. And here I must observe that whatever mode you may adopt of assisting artificially the renewal of respiration, you must bear in mind that air passes into the lungs in the process of natural breathing in a very gentle manner, it is not impelled into the lungs with force; the sides of the chest are enlarged, and the air passes in slowly. You must not use, therefore, the bellows very violently, or you may burst the air passages; you may produce a state of the lungs that may be fatal to the patient. Proceed very gently, and endeavour as much as you can to imitate the mode in which air passes into the lungs naturally. If there are any attempts at respiration you may, perhaps, aid them by applying an irritating vapour to the nostrils; ammonia, or any thing of that kind, will affect the respiratory muscles, and assist the act of respiration. In conjunction with these means, particularly in the case of suspended respiration from drowning, it is expedient to employ all measures that are calculated to restore warmth to the body. When the body has been immersed in water for sometime it becomes very cold; its heat is reduced much below the natural standard; therefore, enveloping the body in warm clothes, warm blankets, for instance, and applying heat by other means also, are important auxiliaries in the recovery of persons who have ceased to respire in consequence of drowning.

Organs of Generation.

Operation in Phimosis.—I have already had occasion, in speaking of venereal diseases, to consider the subject of warts on the external organs of generation, of phimosis and of paraphimosis, so that I need not refer to those now. It is only necessary for me to mention the *operation* that may become necessary in cases of *phimosis*. There are some individuals in whom the orifice of the prepuce is naturally so contracted that the glans cannot be denuded, cases which we may call natural phimosis. The lining of the prepuce, in consequence of thickening from inflammation, may be brought into a similar state; that is, it may be contracted into a small circular ring, so that you cannot uncover the glans; if that contraction remains after all inflammation is put an end to, and after repeated attempts have been made to extend the prepuce gradually, it becomes necessary, perhaps, to perform an operation for its removal. I must observe, however, that this operation is not absolutely necessary under any circumstances. The contraction of the prepuce may produce inconvenience by occasioning a collection of the natural secretion of the glans where patients do not pay those attentions to cleanliness which are necessary; but the want of power to draw it behind the glans does not necessarily impede other functions of the member. I have seen cases where persons with natural phimosis have been unlucky enough to contract both gonorrhœa and syphilis. The operation which is performed when persons wish to have this state of the parts altered, is sometimes accomplished by simply slitting up the prepuce; this, I suppose, is something like the operation

that the Jewish priests perform. I do not know exactly what those are, but I have been given to understand that they *tear* the prepuce with their nails; however, if the prepuce is divided in this way, it leaves the glans entirely denuded, and void of its natural covering.* The external skin in this case is not in fault—it is loose enough; it is the internal portion, and particularly the orifice of the internal lining, that is contracted. The mode of proceeding in the operation, then, is just to embrace a small part of the external skin of the prepuce in a pair of broad flat forceps like these which I now show you, and slice it off with a knife; you then have the internal lining of the prepuce exposed, and you slit that up perpendicularly with a sharp bistoury. You take away a kind of ring of the external prepuce, just corresponding with the contracted lining, but you leave the remaining external portion, and simply slit up the internal lining; you thus liberate the glans, and at the same time leave a partial covering for it.

Cancer of the Penis.—The penis is liable to the occurrence of cancer. You may have cancer commencing in the glans penis, that is, the glans penis may pass into a state of scirrhous induration, and ulcers may occur, having a hardened everted edge, and producing a thin, ichorous, fetid discharge; or you may have cancer of the penis commencing in the integuments of the prepuce, the glans remaining in its natural state. Sometimes, a disease which goes under the name of cancer, consists in the production of a warty growth, from the surface of the prepuce and the glans. When the prepuce is the seat of the affection, the cancerous state is attended with contraction of the orifice of the prepuce, and a discharge of a fetid ichorous fluid from it. Sooner or later after the commencement of this affection, the glands in the groin become enlarged and scirrhous, and the disease takes the same course that cancer does in any other part of the body—it extends along the penis from its entire extremity towards the pubis, and will terminate fatally if the affected part be not removed at an early period. Here are two specimens, I believe, of cancer of the penis, but by this light the different circumstances cannot be very well observed.

Amputation.—There is no remedy for this affection except amputation, and that can only be performed with a rational prospect of success before a scirrhous change has taken place in the absorbent glands of the groin. You must remove the penis at a part beyond the seat of the change which it has undergone, and if you can take away the whole of the diseased part, if you can amputate the penis by cutting into a part that is quite sound, and if no change has taken place in the inguinal glands, you may expect a perfect and permanent cure. The operation is very simple: in the first place, you cut circularly round the integuments of the penis, and when those have retracted as far as possible, you cut through the body of the penis: the integuments will then be loose enough to admit of their being brought together over the stump of the penis. I have never found it necessary in amputation of the penis, to do that which is recommended by most systematic writers; that is, to introduce a bougie or catheter to keep the remaining portion of the urethra open. The truth is, that this proves an additional irritation; the patient makes water very well after the operation, and the introduction of such a substance creates an uneasiness which is not at all called for, so that you may dispense with the bougie with great safety.

Cancer of the Scrotum. I have already had occasion to consider in speaking of cancerous affections of the skin; I come therefore in the next place to speak of the surgical diseases of

The Organs of Generation of the Female.

Prolapsus Uteri is an affection which comes under the treatment of gentlemen who practise in the obstetric department, and I have no observation therefore to offer on it, excepting that the tumour which passes under that name admits of being removed by a surgical operation.

Polypus Uteri.—Here is a specimen of *polypus uteri*; it consists, you observe, of a large pyriform tumour growing by a narrow neck from the cavity of the uterus—it issues from the anterior part of the uterus. Here is one larger than a child's head, and you observe, that this immense mass is connected with a comparatively narrow neck; the uterus is cut open, the vagina is turned back, and you see the neck of the polypus going into the substance of the uterus. You observe that this tumour was quite free in the vagina all round. It is one that I took out myself many years ago. It was completely contained in the cavity of the vagina, and I recollect that the hymen was entire.

While the polypus is small, it is contained within the cavity of the uterus, and therefore we have no direct evidence of the nature of the affection; but after a time, and sometimes in consequence of its being accompanied with considerable pain, the tumour passes into the cavity of the vagina; a sort of parturition of the tumour takes place, and when in the vagina, it produces more or less local uneasiness, from its pres-

* The prepuce is rather cut than torn through by the nails of the circumciser, which are kept particularly long and sharp for the purpose.—Ed. L.

sure on the neighbouring parts; it is very commonly attended with loss of blood; the vessels of the polypous tumour give way, hæmorrhage takes place, and the patient is supposed to have some serious disease of the uterus. Often there is a considerable discharge of matter into the vagina, for the surface of the polypus in the vagina ulcerates and produces a copious purulent secretion, or a discharge of matter coloured with blood. When you introduce the finger into the vagina, you find a tumour situated there, which has usually a smooth, uniform surface, but which may be a little irregular, more or less tuberculated, or granulated; if we carry the finger along the surface of the tumour, and find the neck of it passing into the os uteri, and can observe, by feeling the os tincæ around the neck of the tumour, that it is fairly within that opening, we can have no doubt about the nature of the affection; it is the disease called *polypus uteri*. The small neck of the tumour passes through the os uteri, and the power of feeling fairly round the neck of the tumour is a pretty satisfactory circumstance. However, we do not always find the os tincæ fairly encircling the neck, for it may grow from the anterior or posterior labium of the os tincæ itself, so that, perhaps, you can only feel the anterior or posterior part of it.

Treatment.—The mode of dealing with this affection consists in the application of a ligature around the small pedicle of the tumour, drawing it as tight as the feelings of the patient will permit, and gradually tightening it until the circulation shall be interrupted, and the tumour is detached. The most convenient mode of proceeding consists in the use of the double canula, which I have here. This double canula consists of three pieces, and the ligature is applied round the neck of the tumour by two of the pieces detached and separated from the third. In order to use the instrument, we take these two pieces of the canula (they admit of being separated from the third), and pass a strong silk ligature, or portion of wire, through them, as I have here done; you then carry this along the surface of the tumour up to its root, introducing your finger, so as to get it fairly up. You convey the ligature with this double part of the canula, in the state I have mentioned, up to the part where the tumour is connected to the uterus by its small pedicle. You then keep one of the canulæ fixed, and move the other slowly round the root of the tumour, till the two meet. You have then got a noose of the ligature round the neck of the polypus. These you see are, in fact, two separate canulæ, with a single ligature passed through them; one end is passed down one canula and the other down the other. First you introduce this one into the vagina, along the surface of the tumour, as far as you can carry it; then, keeping one canula fixed, you move the other slowly round the tumour, and in that way make the noose. Having made the noose, the next part of the business consists in adjusting this other portion of the instrument to the two canulæ, by which they are kept steady, and by which you have the power of tightening the ligature from time to time; then pass it through this ring, and also through this portion of the tube, at the bottom, so that it goes on each side through its respective canula; when you have brought the canulæ down to the point at which they join, they exactly fit into each other, and now the three pieces are converted into one instrument; then tying one of the strings round the ring, draw the other as tight as you can, and tie it round the other; fasten it, and leave the canula in its place, having thus embraced the neck of the tumour by the ligature. After a couple of days, having one of the strings fixed, you draw the other again as tight as the yielding of the neck of the polypus will allow; you then pass it as before, leave the canula in its place in the vagina, and thus from time to time draw the ligature tighter until it makes its way through the root of the tumour. This is the instrument recommended by the late Dr. Gooch, to be used in instances of polypi. I have employed it, and found it both easy and perfectly effective; I believe it is by far the simplest, and I should conceive most effective, mode of treating polypi by ligature.

Cancer of the Uterus.—With respect to cancer of the uterus, surgically speaking, a question will occur, whether it can properly be made the subject of operation, and if so, what operation should be performed for it? Of late years, we have read much in foreign medical journals (the French particularly), of the operation for cutting out the os tincæ when it is the seat of cancerous disease; and we read, that a French surgeon—(who, if he did not introduce this operation, has practised it very extensively)—that *one* individual—has operated in this way not less, I believe, than fifty or sixty times! That he has performed the operation of cutting out the os tincæ, and a certain portion of the neck of the uterus, in cases where they have been said to have been the seat of cancerous or malignant disease, as often as fifty or sixty times? The mode of proceeding consists in introducing a *speculum vaginæ*, or an instrument which distends the vagina, and gives you the power of seeing to the bottom of it; then in introducing a pretty strong hook into the anterior, and another into the posterior part of the cervix uteri, drawing it down by them, and cutting it away with a scalpel to the required extent. Now, if one individual has had occasion to

do this fifty or sixty times, we should suppose that a state of parts requiring such an operation, would be of very frequent occurrence. I cannot, however, say that I have ever seen any instance myself, in which an attempt of the kind has appeared to me to be at all feasible, according to the principles which govern our proceedings in other cases of malignant disease. If we are considering what we should do in cases of cancer of the breast, or any other part of the body, we inquire into the limits of the disease; we inquire, whether we have the power of fairly removing all the parts affected with the disease; we inquire also, whether the disease has extended beyond its original seat to the absorbent glands in the neighbourhood; that is, whether there is such evidence of the extension of the disease to the system generally, as is afforded by the glands having taken on the affection: and we deem an accurate knowledge of all these circumstances necessary before we can venture to recommend even the simple operation of removing a tumour of this sort from the breast or any other part. Now it seems to me, that we have no means of determining such points in the case of the uterus. In that, we cannot tell how far a diseased change of the cervix uteri may extend, nor how far the neighbouring parts may be affected,—we have no means of judging of this, and, therefore, in my opinion, we must proceed quite in the dark in fixing an estimate of these points. I cannot see how we can arrive at the knowledge which would justify us in performing such a painful and serious operation. The affection of the cervix uteri, which passes under the name of cancer, is generally a state of ulceration, more or less of the phagedenic character, attended with a good deal of pain, and a copious discharge, and, certainly, extending pretty extensively to the surrounding parts. Now, this is by no means a very uncommon disease; at the same time, it is not so frequent as to make it easy for one person to have fifty or sixty cases. I cannot help thinking, therefore, that the portions of uteri removed in many of those cases cannot have been affected by any malignant disorder, and, consequently, that they must have been cases in which the disease, whatever it might have been, might have come to a favourable termination without the performance of the operation. At all events, as the matter now stands, the circumstances that point out its necessity, and the state of things that would lead one to say that so painful and dangerous an operation can be performed with a prospect of permanent success, are so little settled, that I am for my own part little disposed to recommend the operation.

Removal of the Uterus.—A still more serious operation has been recommended of late, and that is, entire removal of the *whole* of the uterus; and it appears to me, that all the objections to the operation of excision of the cervix of the uterus apply with tenfold force to the extirpation of the entire uterus. In the first place, in the great majority of instances, the patients have died of the operation, that is, they have died within a few hours after the operation,—manifestly of the operation itself: the operation, in fact, has been fatal. If the same circumstances characterise the diseases of the uterus which are called cancerous, that distinguish cancerous affections of the female breast, we should hardly expect the operation to be permanently successful, even if the patient did not die immediately after it, as they have hitherto, because we find that the affection is by no means confined to the part first concerned; that it attacks the absorbent system, that it extends to other parts of the economy, and, consequently, that the patient who has undergone the operation, and escaped the chance of death consequent on it, according to the evidence now before the public, would probably die of the disease after all. According to the evidence, therefore, which we have, I must say that I consider the extirpation of the entire uterus a totally unjustifiable operation.

Extirpation of the Ovary.—I have had occasion to speak to you of the operation of paracentesis of the abdomen and diseases of the ovary. Now the enlargement of the ovary has been made the subject of a surgical operation, of the same kind as that performed on the uterus; that is, diseased ovaries have been removed from the abdomen. The operation merely requires an incision to be made through the integuments of the abdomen, extending from the pubis to the ensiform cartilage; exactly the same kind of cut that you would make in examining a subject after death; but according to the evidence hitherto given by those even favourable to the operation, it appears that in some instances when this incision has been made, the tumour has been so connected with the surrounding parts, that it could not be removed, and the operators have been obliged to close up the abdomen again. I believe in one or two instances even, that have been published, it has turned out, after making the incision, that there was no diseased ovary to take away; and I believe there have been one or two escapes with life. I rather think there is a woman now alive on whom this operation has been performed, and she has got a scar of the length I have mentioned to you; but in that case there was a lump proceeding from the situation of the ovary as big as my head. It is rather a curious case.

The observations I have made with respect to extirpation of the uterus, apply

equally then to the extirpation of the ovary: it is an operation so likely to kill the patient, that I do not think it advisable to proceed to it. But there is this further observation to be made, that patients with diseased ovary often live a great many years; it does not materially shorten life, and there are many instances in which patients have lived with disease of the ovary for five, ten, fifteen, and twenty years. I performed the operation of tapping the ovary for a lady some time ago; the tumour was not very large. I let out a moderate quantity of fluid—I suppose about a gallon. She remained well, not requiring the operation again for five years, and during the whole of that time experienced very little inconvenience; but the tumour had then slowly increased to about its former size, and I tapped her again, and let out the same quantity as before. Now I really do not know any reason why that lady should not live in a tolerably healthy state for twenty years to come, though I think she would stand a very good chance of dying if I attempted the extirpation of the ovary. I remember another instance of a pretty healthy woman; she got very large, as large as if she had been at the full period of gestation; I tapped her, and let out more than an ordinary pailful of fluid, and for between two and three years there was no appearance of its return; the ovary got quite quiet; she grew well, and was able to pursue her laborious avocations; she was, indeed, quite well. For these reasons, therefore, considering that although the disease of the ovary may not be susceptible of cure, it does not, under many circumstances, materially shorten life, I should be very little disposed to practise so hazardous an operation.

Obscure Disease of the External Organs of Generation in Female Children.—There is only one other subject respecting the female organs of generation to which I need advert; and that is a peculiar kind of inflammation incidental to the external organs of children, which, in some respects, is important, for it is a serious affection of itself, and, further, has been, in many instances, confounded with syphilitic affections, a mistake which has given rise to questions of a very serious nature. It occurs in young subjects of from four or five to eight or ten years of age; it consists of inflammation of the labia and the external organs generally, which assume a deep dusky red colour, and in which foul ulcerations form with a tawny grey, and sometimes an actual sloughing surface. They are very painful, attended with a thin fetid discharge, and sometimes extend so as to occupy a considerable portion of the surface of the external organs of generation, with feverishness, restlessness, great pain, and very considerable disturbance of the health of the child. These appearances have, in many instances, been supposed to be syphilitic, and hence have arisen, in some cases, suspicions that children have been ill used; in fact, that persons have had connexion with them, and imparted to them disease; consequently, in some cases, judicial trials of a serious nature have been the result. I had occasion myself to see a child in whom this affection had occurred (though the severity of the affection had then gone by), where it had taken place simply in consequence of these peculiar circumstances in the state of the health, and where, in consequence of previous professional opinions that it was the venereal disease, the child was questioned and interrogated, until I believe, from fear and apprehension, she gave in to the idea that had been suggested, and strongly entertained, by the parents, and said that a certain youth had done something or other to her; this proceeded so far, that the suspected individual was taken to Bow-street, examined there, and, in fact, tried at the Old Bailey on a capital charge of violating this young person; on that trial I gave evidence, and it is not the only instance in which a circumstance of this kind has taken place.

Now I must observe, that the characters of this disease are totally dissimilar to those of syphilitic affections. There is, in the first place, an excessively deep-coloured inflammation, with great disturbance of the health of the child, in the very commencement of the affection, and then the ulcerative process that takes place on the inflamed surfaces is foul and sloughing, and of a tawny colour, totally different from the characters of any primary venereal sore.

Treatment.—Soothing applications to the parts are necessary, in the active period of inflammation, with such attentions to the general state of health as the obvious disturbance of the system may require; after this period has passed by, you generally resort to the exhibition of tonics, more particularly bark, and under the employment of these means we generally find that the health of the child is restored, and that the affection slowly gets better, though, in some instances, it has been so serious as to prove fatal.

Lecture LXXVI.

Urinary Organs continued.—Wounds of the Urethra.—Hæmorrhage from the Urethra; Causes; Treatment.—Hæmaturia.—Gonorrhœa Benigna.—Irritable Urethra; Treatment.—Stricture; Causes; Symptoms; Treatment.

Wounds of the Urethra.—Simple incised

wounds of the urethra, like those which we make in order to remove a stone when it lodges in the canal, heal very readily; for a time the urine escapes in part, or perhaps entirely, through the openings that are thus made, and that is all the inconvenience patients experience. Lacerated wounds of the urethra, such as those produced by a fall upon the perineum, unaccompanied with wounds of the integuments and external soft parts, are much more serious injuries; for, in this case, there is generally retention of urine, and we are often unable to relieve the patient by the introduction of the catheter; if we attempt to pass the instrument into the bladder, it escapes from the canal at the situation where it has been lacerated, and we cannot get it forwards into the bladder. The urine, instead of being expelled through the natural course, is forced out at the torn part of the canal, and injected into the cellular membrane, in the neighbourhood of the part at which the injury has been received; hence it becomes necessary to make an incision into the integuments and external soft parts in the perineum, so as to cut open the urethra, in order to give exit to the urine, and, at the same time, to prevent its further infiltration into the cellular membrane.

Hæmorrhage from the Urethra.—Blood is discharged through the urethra under various circumstances, either in consequence of causes affecting some part of the canal of the urethra, or of disease situated in the bladder, or some other part of the urinary apparatus. In the former case, that is, when the blood proceeds from some part of the urethra, it passes out pure from the canal, either in a fluid or in a coagulated state; this is, properly speaking, *hæmorrhage from the urethra*. When the blood comes from the bladder, or from the kidney, it is mixed with urine; the urine becomes altered in its colour, according as it is mixed with a greater or smaller quantity of blood; the patient is said to make bloody urine, and the disease is called *hæmaturia*.

Causes.—The introduction of instruments, the application of caustic, and violence of various kinds, will produce hæmorrhage from the urethra—that is, the discharge of blood unmixed with urine from the canal of the urethra.

Treatment.—In general, rest; the application of cold externally, and the antiphlogistic treatment, will put a stop to bleeding from the urethra, more particularly where the cause is of a temporary kind, and where it is no longer applied. If there should be bleeding of any obstinacy, either from the bulb, or from any portion of the canal situated in front of the bulb of the urethra, we have the power of commanding it by direct pressure; we can apply pressure externally, so as to prevent the efflux of blood from any part situated anteriorly to the bulb. There are some instances, more particularly in elderly persons, where discharge of blood takes place from the urethra, without our being able to point out exactly the cause of its appearance; generally it takes place in individuals in whom we have reason to expect affection of the prostate gland. In these cases the patients are generally a good deal alarmed by the symptoms; but I have usually found, though it is not very speedily checked, that after a certain length of time the hæmorrhage has subsided, and the case has terminated favourably. I remember the instance of an elderly gentleman who had an attack of retention of urine, for which I attended him for a considerable time; it was necessary to draw off the water regularly, which was done without difficulty, and the bladder slowly regained its power; but before his complete recovery he had bleeding to a considerable extent from the urethra, which was not from the introduction of instruments, or any cause of that sort, but came on at the time the bladder was recovering its powers, and at last ceased entirely, without any ill consequence. About four or five times he had a recurrence of bleeding from the urethra, although he had regained his power of expelling the urine, and had had no occasion to resort again to the use of instruments. This hæmorrhage continued only a few weeks, and did not oblige us to have recourse to curative means of any consequence. I recollect another instance of an elderly gentleman who was affected with bleeding from the urethra without any apparent cause, and where no disease could be discovered in the urinary organs. He lived at some distance from town; and the gentleman who saw him in the country had introduced bougies, and made injections, for the purpose of restraining the bleeding, but with no good effect. He therefore came to town to consult me, and I recommended that those means should be laid aside, that he should be kept quiet, and that mild antiphlogistic means should be adopted, under which the bleeding ceased.

Hæmaturia.—Hæmorrhage to a very considerable extent will sometimes take place from the bladder, the urine being mixed with blood, in consequence of the mechanical irritation of stone in the bladder. I remember being sent for to a gentleman about the middle period of life, labouring under symptoms of stone in the bladder, who was suffering excessively from an effusion of blood into the bladder. He became unable to discharge his urine, so that at last the bladder was excessively distended. Perhaps at intervals of half an

hour or an hour, he was able to force out about a teaspoonful of bloody fluid with great suffering. I introduced a large catheter, and a very considerable quantity of bloody urine with coagula of blood was expelled from the bladder with great force; this gave him material relief. A recurrence of the bleeding however took place, and it was necessary to use the catheter again several times within the twenty-four hours, by the expiration of which time, from the application of leeches, the warm bath, fomentations to the perineum, and so on, the bleeding ceased, and the symptoms disappeared. This gentleman, however, had another attack of a similar kind, in consequence of taking too much exercise, or some improper indulgence (I forget which), and it lasted for a longer period, but ultimately went away in the same manner; he afterwards underwent the operation of lithotomy and recovered.

Hæmorrhage from the bladder sometimes takes place in consequence of organic disease affecting the prostate or bladder. These parts are liable to disease of the fungoid kind—to fungus hæmatodes; and when this proceeds to the ulcerative stage, a flow of blood mixed with the urine is the consequence.

In such cases we can do nothing but palliate the symptoms with narcotics, and have recourse to the mechanical assistance which the catheter affords, if indeed the introduction of the catheter do yield any relief.

The cause of the bloody admixture of the urine, however, is sometimes situated further than the bladder; somewhere about the kidney: here we must adopt such treatment as the local affection of the kidney points out: it may be necessary to take blood by cupping, to use the warm bath, or the hip bath, and repeat these means according to the urgency of the affection. In a case where the affection does not yield to such measures, and where, after we have removed all inflammatory symptoms, bleeding still continues, I should have recourse to the exhibition of the *superacetate of lead*, or *alum*, internally.

Although the urethra and the penis are more frequently diseased in consequence of venereal affection, yet they are liable to suffer like other parts of the body from ordinary causes of disease; thus we may have mucous inflammation of the urethra attended with an increase of its natural discharge, accompanied perhaps with pain—scalding in making water, and in fact, we may have a state produced, very similar to that which takes place in gonorrhœa, from causes of quite a different nature. When an affection of this kind arises from other than venereal causes, it has been called,

Gonorrhœa Benigna,—in opposition to gonorrhœa *virulenta*,—the terms benigna and virulenta, not indicating the mildness or severity of the symptoms, but denoting the nature of the causes which produce those symptoms. Virulenta generally means that which is produced by the morbific or poisonous matter of gonorrhœa; the other term indicates any other cause that may excite inflammation of the urethra: changes in the state of the urine are, no doubt, capable of effecting a change in the mucous membrane of the bladder and urethra. The urine varies very much in its composition and qualities, and in some of the changes it undergoes it becomes acrimonious, and irritating to those surfaces with which it comes into contact. Most persons are aware from their own experience, that from certain states of the nervous system, the kidney will secrete a fluid nearly like limpid water, which nevertheless is very irritating, so that the person feels it necessary to retire to make water very frequently. That the urine undergoes great changes in gout we know; sometimes an attack of inflammation of the urethra will come on, accompanied with a discharge that can hardly be distinguished from that of gonorrhœa in a gouty individual who has not been at all exposed to the cause of gonorrhœa virulenta.

There is thus an *arthritic gonorrhœa*.—Patients affected with any complaint of the urethra (whether it should be gonorrhœa or any other kind of disease), often observe after an excess of drinking an aggravation of the complaint; they will often tell us they were going on very well, but having dined in company and drank more wine than was proper, the inflammation became increased, and all the symptoms were aggravated. The urethra no doubt, under certain circumstances, is capable of being injuriously affected by the excitement connected with sexual intercourse, more particularly if that be carried to an excess, and a state of the urethra exists in certain individuals, in whom slight occasional excitement is sufficient to produce disease; this state is said to be a state of,

Irritable Urethra;—perhaps it might be called with equal propriety a state of inflammation, or inflamed urethra. There is increased frequency of micturition, very commonly pain, and some degree of difficulty in passing the water. The urine sometimes passes easily, and sometimes with difficulty. There may be a discharge from the urethra in a greater or lesser quantity. The inconveniences which the patient complains of in the discharge of the urine often lead the surgeon to examine the state of the passage by instruments; he introduces a bougie or catheter; it is found sometimes that an instrument will pass easily, at other times an obstacle is experienced, so that an instru-

ment will not readily go into the bladder, hence the notion of *spasmodic stricture*; it is supposed that this obstacle is produced by a spasmodic state of some of the muscular fibres surrounding the canal. Probably in this case there is no real stricture in any part of the canal, but only an obstacle produced in some situation or other by the inflammatory tension, a partial enlargement in consequence of inflammation of some portion of the lining membrane. The introduction of an instrument under such circumstances not uncommonly occasions bleeding; that is, some of the overloaded vessels of the tender mucous membrane become lacerated by the introduction of the instrument, and bleed. In such a state of inflammation, disease is sometimes produced in certain parts contiguous to the urethra; inflammation or chronic enlargement of one or of both testicles may arise under such circumstances. Redness, excoriation, superficial ulceration, or even deeper ulceration of the glans or of the prepuce, may be occasioned in this way. In some individuals, the glans and prepuce are more liable to excoriation and ulceration in consequence of sexual intercourse, than in other individuals, and there are some persons who, from causes like this, hardly have venereal intercourse without experiencing inconvenience of this sort—even individuals in married life who do not expose themselves to any risk of venereal infection.

Treatment.—The symptoms which constitute what has been called an irritable state of the urethra, or, rather, those which denote it, are generally got rid of very easily by getting rid of the cause which produces them; that is, by regulating the diet and paying attention to the digestive organs. In addition to this, you should apply tepid applications to the perineum or lower part of the abdomen; use the hip or warm bath, and give the patient diluent and mucilaginous drinks. You may also abstract blood, by leeches, from the perineum, or by cupping, from the loins; and it may be necessary to have recourse, in failure of these means, to mild narcotics—to hyoscyamus or opium, particularly in the form of Dover's powder. The local administration of these remedies, of hyoscyamus or tinctura opii, in glysters or suppositories, may be of use in certain cases. In general it will not be found that the introduction of instruments into the urethra is of particular advantage in these cases, but yet there may be cases in which, after we have employed the remedies which we think most calculated to give relief, and where the patient still continues to suffer we may find the stimulus produced by the introduction of an instrument of advantage.

Stricture of the Urethra.—Stricture of the urethra means, simply, contraction or narrowing of the dimensions of the calibre of the canal, produced by a change of structure in some part of it, consequent on effusion produced by inflammation, or on the cicatrisation of an ulcerated surface. When the urethra is highly inflamed, as in the case of severe gonorrhœa, the blood-vessels of the part become distended, and the membrane itself is changed, in consequence of effusion within its texture, and hence the dimensions of the canal, generally, are diminished, so that the urine passes out through a very small canal, and one which is very irregular in its fissure. Hence the patient makes water with great difficulty, passing the urine drop by drop, and ultimately, perhaps, complete retention of urine may be produced simply by the diminution of the calibre of the canal, the state of its vessels consequent on inflammation, and the thickening of its membrane. This is a kind of diminution of the calibre, which depends on temporary circumstances; therefore it only endures for a short time and goes off again. If a vessel be injured at this time, when all the vessels are much enlarged, it may produce a very copious bleeding. I have known a person lose perhaps a pint of blood in consequence of such an occurrence, and that with great relief to the symptoms. Inflammation confined to a certain spot of the canal may produce effusion into the inflamed portion of the membrane, and into the cellular texture or the other textures immediately around it; this, if it proceeds, ultimately causes induration of the affected part, and, consequently, a narrowing there of the diameter of the canal. These are permanent changes, and the contraction of the canal produced in this way, constitutes what is technically called *permanent stricture*, in opposition to that temporary and occasional difficulty in the passing of the urine which I have alluded to under the name of spasmodic stricture. Now the permanent stricture, which exists in various degrees, forms a readily perceptible contraction of the membrane which lines the canal, an induration or condensation of the textures surrounding it, a completely hardened callosity of the parts. They may be so hardened, that on cutting through them a noise is produced, as if you were cutting a portion of cartilage, such is the extent to which the induration may proceed, and you may have every intermediate change.

The change in question may either occupy the whole diameter of the urethra, producing a circular contraction, or it may occupy only one portion. The *circular* stricture is the more common, it may be confined to one spot of the urethra, and appear just as if a piece of packthread had been tied round the canal; or the change may occupy a considerable extent, sometimes half an inch or more. Sometimes you have changes of the canal of

this sort, at short distances, with the intervening portions tolerably healthy, that is, you may have one stricture or more than one.

We have got specimens of these varieties of the affection. This is a specimen of a contraction just at one point. This is a contracted portion of the urethra, which is perhaps nearly an inch in length. Here is an example of a very rigid stricture. This is a urinary canal, where there are contractions at various points in the diameter of the canal.

You will find, on examining specimens of stricture, that the change is not confined simply to the smooth membrane which forms the lining of the canal, but that it extends to the textures which surround this membrane externally; thus in the bulb of the urethra, or in that part which is surrounded by the corpus spongiosum, in the case of a stricture of long standing, you will find that the latter will be completely condensed and the cells obliterated; and very frequently you have a similar obliteration of the cells, extending to a considerable distance around the immediate seat of contraction. The seat of stricture is different in different instances; most frequently it is in the membranous part of the urethra, and especially at the point where the membranous portion joins the bulb. This which I now exhibit, is a cast of the urethra; the part which swells out here is the bulb, so that there is a natural contraction between the membranous part of the bulb, and this is where stricture is most frequently formed. This cast will show that the dimensions of the urethra are not one and the same throughout. Now you frequently meet with stricture anterior to this situation; but when you do so, you generally find, that with the anterior stricture there is also a contraction in the situation I have mentioned. You may have one or two strictures in the anterior part of the urethra, and also a stricture at the bulb. It is not very common to have stricture towards the orifice of the urethra, or at least it is much less common there than in the situation I have mentioned. When stricture occurs towards the orifice of the urethra, the patient generally experiences very considerable inconvenience from it, because in this case the whole of the length of the passage situated behind the stricture is exposed to the inconvenience produced by the obstacle to the passing of the urine; the stricture that is situated behind this anterior portion is less liable to irritation, therefore you are not surprised to find, that a stricture in the anterior part of the urethra (which is more near the sentient part of the organ) is more painful, and induces symptoms more considerable in comparison, than a stricture which is situated where it is more frequently formed.

Causes.—The causes of stricture include all circumstances that are capable of exciting inflammation in the mucous membrane of the urethra; and of those, undoubtedly the most frequent is gonorrhœal inflammation.

Symptoms.—The symptoms of stricture, more especially in its earlier stage, are merely the effects which it produces in the act of expelling the urine. The membrane of the urethra is not a part of great sensibility, therefore the changes which produce a stricture in the male urinary canal, do not excite of themselves any serious symptoms, such as pain, or any thing of that kind. The stream of urine is diminished in consequence of the narrowing of the canal; it may be diminished, so as to be not larger than a crow-quill, or it may even be reduced to a still smaller size. The stream of urine, in fact, may be interrupted entirely, so that the patient can only void it by drops. The patient experiences a more frequent desire than natural to expel the contents of the bladder; this no doubt arises from some degree of inflammation communicating from the stricture, the mucous membrane of the bladder occasioning the bladder to contract, when it contains a small quantity of urine.

Treatment.—The treatment of stricture may consist either in the employment of those general measures which are calculated to lessen inflammation, or in the application of means which may act directly upon the strictured part of the canal. I need not repeat to you the measures that are necessary to be employed in order to reduce inflammation, when such are indicated by the symptoms; and I may therefore proceed to consider the means that are necessary to be applied to the strictured part of the urethra *itself*. These means consist, then, either in such as are calculated *mechanically* to enlarge the contracted part of the urethra, or in those which have the effect of destroying, by their escharotic properties, the diseased portion of the canal. When I speak of mechanically dilating the contracted portion of the urethra, I merely use that expression in order to denote to you the employment of instruments which act simply in a mechanical way on the urethra, and have no stimulating properties. We can hardly suppose that the stricture is enlarged simply in the mechanical manner in which we may enlarge an opening in any dead matter; although the introduction of instruments at the moment enlarges the part, and is found to relieve the symptoms and ultimately to remove the contraction, we cannot entertain a doubt that this is produced by a change in the organ—a change of the part effected—a vital proceeding, and not one which is merely mechanical. For this purpose, instruments of various kinds have been employed. In the first place we use

bougies; bougie is a French term, which means a *wax candle*, or taper. The ordinary bougies are made of linen, spread with resin or plaster, or other things of that sort, which are hard when cold, but when warm become soft. When they are introduced into the body, they become soft, and will consequently take the direction of the canal into which they are introduced. The inconvenience consequent on this kind of thing is, that their softness, when they become heated, occasions them to stick in some part of their way through the urethra, so that they do not pass so readily as substances of a permanently hard and polished nature. When the instrument curves too, it becomes more or less irregular in its shape, and hence some further degree of difficulty arises to its passing along the urethra. For these reasons the employment of plaster bougies is not so good as that of metallic instruments; hence we generally restrict them to those cases which require small bougies, and where plaster bougies, from their inclination to adapt themselves to the stricture of the canal, are employed from necessity. I need hardly observe to you, that in the introduction of these or of any other instruments, the surface should be well smeared over with oil, or some other greasy substance, to render the passage along the canal more easy. Bougies are sometimes made of elastic gum; these are flexible, and in consequence of their elasticity, recover their figure, so that in most cases they are not so good as the plaster bougies. Bougies are sometimes made of *cat-gut*; these, however, are very rough, they are very liable to wound the tender surface of the urethra, and therefore are not fit for introduction into the urethra; consequently they are very seldom employed. Then we make use of metallic instruments of different kinds—steel sounds, silver catheters, and so on. An instrument is made with a combination of metals; I do not know exactly its composition, but it has the same degree of polish that steel or silver has, and is much cheaper than a silver instrument of the same size, possessing the convenience of not rusting like steel. Metallic instruments certainly have the advantage of passing much more easily through the urethra than plaster bougies; the surface being perfectly bare, there can be no kind of adhesion of the membrane to it, and the inflexibility of the instrument gives you the power of guiding the point of it in any direction you may wish, and of determining its general direction. In using the plaster bougie, you cannot alter the direction which the point takes; you may introduce it curved or straight, but you must push it on, and you cannot turn it to one side or the other; but you may do either of these with the metallic instruments, and thus you may obtain a much greater power with them than with the plaster bougies; in fact, you will find it much more convenient to employ the former than the latter, and you will often succeed with them when you cannot get the plaster bougies into the bladder. An instrument that is perfectly straight, and at the same time inflexible, can be introduced through the urethra into the bladder. As the urethra, however, is a curved canal, instruments that are bent in conformity to the canal, pass much the more easily; and as the object in the use of metallic instruments, whether catheters, metallic sounds, the staff that is employed in the operation of lithotomy, or any other kind of instrument, is the same—that of introducing it along the canal of the urethra with facility—all the instruments which are designed to be used in the diseased state of the canal, should have the same curve as the healthy canal. Now if you look at a number of these instruments in an instrument-maker's shop, you will find great difference in them with respect to their curves, a difference for which there is no good reason. A catheter, sound, or staff, should each have the same curve, if the object be to pass it through the canal with the greatest ease to the patient. This is a kind of curve which I now show you very commonly seen in sounds and staves; but the curve that I find most convenient for all these instruments, is the one I now show you, and in which the curved portion of the instrument forms a portion of a much smaller circle than that which is seen in instruments of the ordinary kind. Upon putting this on paper, and drawing a line round it, it seems to me that the curvature here is that of a circle of four inches in diameter, which I should describe to be the degree of curvature necessary in an instrument that will pass into the bladder with the greatest ease.

In introducing this solid metallic instrument into the bladder, the most convenient mode of proceeding is, to place the concavity of the instrument towards the abdomen of the patient, although you may introduce it with the concavity towards the pubis; or you may introduce it laterally, with the concavity towards one side or the other. In introducing the instrument thus, with the convexity towards the abdomen of the patient, you carry it in a straight direction downwards, with the handle of the instrument inclined towards the abdomen, till it has passed through the straight part of the urethra down to that part which is just below the pubis. Now then, pushing it straight on, with the same kind of motion with which you have brought it to this situation, you find that it will not pass; you come to the point where the urethra bends, and then, as it bends backwards and

upwards, you accommodate the course of the instrument by carrying the handle of it forwards and downwards, and thus you make the point of the instrument rise through the curved part of the urethra, and enter the bladder. If you use an instrument with the curve I have mentioned, and introduce it gently in this way, the urethra being in a healthy state, you will find that by merely getting to the upper part of the urethra, it will fall into the bladder by its own weight; in many cases, you hardly want to guide the instrument at all; the instrument being in the curve of the canal, you simply carry the handle backwards, and then leaving it to its own weight, it will fall into the bladder, if there be no impediment from stricture or disease; this is the clearest proof that such an instrument is well adapted for introduction into the bladder. I think it expedient, in the introduction of all instruments of this kind, to let them pass very gently, and to let them find their way slowly into the bladder, although that may not be considered the most dexterous way of introducing them. You will sometimes see persons introduce an instrument into the bladder, almost as if they were performing an act of legerdemain —pop it down, pop it out, and pop it in again; it looks more clever if you do it in that way, but then, if you do not happen to *pop* it in just in the right manner, you hurt the patient, perhaps, confoundedly; at all events, I should like a surgeon in operating upon me, to do it gently, and not to give it the pop; and, therefore, I follow the rule of doing it gently and cautiously. In the introduction of the catheter, you in the first place, select such an instrument as you think will probably pass into the bladder; oil it well, and then introduce it into the orifice of the urethra; you come to a point where it may be stopped, you allow it to rest for a little; you apply, perhaps, a very slight degree of pressure, and still, perhaps, you find it will not pass; keep it in a short time, and then take it out; then pass one in of a smaller size, and in this way, find out what degree of instrument the urethra will admit. Having made the discovery, you introduce the bougie or sound down to the stricture; perhaps, you will find it pass gently through it into the bladder, or you will find the point stop for a minute or two, and with a very little force find its way into the bladder; after thus introducing it, you may leave it for a short time, and then withdraw it. You repeat the introduction of the instrument in three, or four, or five days, and increase the size gradually. You will find by introducing it thus, that the strictured portion enlarges, and that you can pass an instrument of a larger and a larger size, until, continuing to do so, the urethra is capable of receiving a full-sized instrument. And here you will naturally ask, What is the full size of an instrument of this description? I do not know whether this is considered a full-sized catheter or not, but I suppose it is. The largest point of the urethra, as you will see by this specimen, is perhaps a little less than the end of my little-finger; and I believe we may say in round numbers, that a full-sized urethra—a urethra of the natural size—will admit a bougie or metallic instrument, which is about *a third* of an inch in diameter.

I may observe to you that it is not necessary in all cases to go on enlarging the instruments until you can introduce one of the size I have now shown. A patient may be able to void his urine with perfect ease, he may be subject to nothing that can be called disease of the urethra, although the canal will not admit an instrument so large as this. Some surgeons, with respect to the use of bougies in stricture of the urethra, seem to proceed upon a supposition that it is necessary and advantageous to introduce the largest instrument that can be made to pass, to let it remain as long, and to repeat it as often, as possible. I consider that these three notions are quite wrong. It would be almost safer to act on notions totally the reverse. In the treatment of this complaint you must not fix your attention exclusively on the mere circumstances of stricture and narrowing of the canal, and on the idea of enlarging it by the mechanical use of instruments. You must recollect that inflammation has been the cause of the disease, and that a continuance of inflammation will maintain, or will aggravate, the induration and thickening on which the disease essentially depends; therefore, the primary indication in the treatment of stricture is to remove inflammation. You must recollect that the use of instruments, and the application of caustic, are themselves capable of exciting inflammation in a healthy urethra, and consequently that they are very capable of aggravating inflammation in a urethra already inflamed—capable of increasing the stricture and inducing retention of urine. You must, therefore, in all these cases, proceed gently in the means you adopt. Introduce instruments gently; do not forcibly enlarge the stricture, nor repeat the passage of the instrument more than once in three or four days generally; and in cases of an aggravated kind, where the stricture is considerable, where it has already lasted for a long time, where you find that by using instruments of a larger size you only produce inflammation and aggravate the symptoms without enlarging the dimensions of the canal, if the patient be able to pass the urine with tolerable facility, if he do not suffer any material inconvenience, leave the urethra quiet, and do not irritate it by the

introduction of instruments at all. You will find it better to abstain in such a case from all such sources of mechanical irritation, than to persist in attempts at enlarging the urethra, which you really cannot accomplish. I attended for several years an elderly gentleman who had been the subject of stricture for a great length of time—so long, indeed, that, originally, he was a patient of Mr. Bromfield, a surgeon of St. George's Hospital two or three generations ago. This patient could only admit an instrument of very small size. In consequence of living a not very regular life, he experienced considerable suffering from a state approaching to retention of urine which I occasionally relieved. I was anxious to enlarge the stricture that he might not continue to suffer from it, and I made frequent attempts by the introduction of instruments, but I always found that these increased the difficulty of passing his urine. He was himself anxious to have his urethra enlarged in size, and thus I went on for a long time trying to accomplish the object. It happened, however, on one occasion when he had suffered considerably, and a retention of urine was almost induced, that it was necessary to leave off the use of instruments for some time, and on calling on him again, I found him better; I then told him he had better not have the instrument on that occasion introduced, for I thought it would be better to wait a little; he did so, and on calling again to see him, I found him so much better, that I was led to leave off the use of instruments altogether. For the last two or three years of this gentleman's life, therefore, I did not introduce any instrument at all, and he was during that time much better than when he was in the habit of having them introduced frequently. There are several cases of this kind (cases of long-established disease of the urethra) in which it is best for a patient, if he have the power of voiding his urine with tolerable facility, to be contented with his lot, and not to have the parts irritated by the employment of the means I have mentioned.

It is necessary for you to be on your guard in the use of instruments of a small size, whether they are bougies or metallic instruments, for the points of such instruments may pass into the openings of the mucous lacunæ of the urethra, or become entangled in the soft surface of the mucous membrane, and thus you may be led to suppose that disease exists where there is no morbid condition of the urethra whatever. Thus it frequently happens too that a small instrument will not pass into the urethra, though you can introduce one of a greater size, and it has happened to me several times to meet with patients who have been under great alarm, from having, as they supposed, the greatest possible stricture, from the fact, that the smallest instrument would not pass into the bladder, while I have found an instrument of full size pass at once with perfect ease.

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BRONCHIAL INFLAMMATION AND DISEASES OF THE HEART. A series of seventeen cases related by Dr. Hastings, of Worcester, illustrative of the connexion between bronchial inflammation and affections of the heart, affords the following summary of facts:—

1. That bronchial inflammation and diseases of the heart are frequently co-existent.

2. That, in this combination of disease, the most simple and most common deviation from the healthy condition of the heart, is the congestion of blood, and consequent dilatation of cavities, at the right side of the heart.

3. That this state is productive of embarrassment of the functions of the body, but not to any very considerable extent.

4. That, in acute bronchitis, we frequently find inflammation at the same time in the pericardium, in the substance of the heart, and in the valves or lining membrane of the same organ; of these, inflammation of the pericardium is by far the most common, and is seen especially where bronchitis succeeds or accompanies acute rheumatism; but this affection often yields to proper treatment.

5. That, in cases of dropsy succeeding winter cough, chronic bronchitis, and asthma, there is, for the most part, more or less of disease in the heart and its membranes, as general dilatation of the cavities of the heart, ossification of its valves, thickened pericardium, and effusion either of a sero-purulent, sero-sanguinolent, or serous nature, into the sac of the pericardium.

6. That these cases, even at this advanced stage, admit of considerable mitigation of the symptoms, and of prolongation of life to an indefinite period.

7. That bronchitis is occasionally also, and for a length of time, combined with heart disease, without any dropsical symptoms ensuing, and without being productive of so much disturbance of the functions of the body as the great alteration in the structure of the organ might at first lead us to anticipate.

The following is the last of the seventeen cases:—

Inflamed Bronchia and hepatized Lung; enlargement of the Heart; Aneurism of the Aorta.—A gentleman, aged 46, engaged in the profession of the law, of sanguine temperament, and particularly subject to inflammatory diseases, who had, moreover, early shown a great disposition to catarrhal complaints, became, at the age of thirty-five, for the first time, the subject of a severe bronchial inflammation, which left him, ever after, very susceptible of cold. To such an extent was this the case, that he never spent any winter afterwards without an attack, more or less severe, of bronchial inflammation. These attacks were generally subdued by strict antiphlogistic regimen, and as he was a strong man, of full habit, he generally bore loss of blood well. Occasionally, during these attacks, the pulse was observed to intermit, but this was, on the whole, a rare occurrence. From the beginning of the year 1826 I attended him, and found him labouring under loss of voice, cough of a deep-sounding character, and coming on in violent paroxysms; copious expectoration of a purulent character, occasionally tinged with blood. He did not lose flesh, and had a good deal of muscular energy, so much so, indeed, that he could not be prevailed upon to desist from great mental and corporeal exertion. The pulse was, for the most 'part, full and strong; but I never observed it at any time irregular. There was little variation in the symptoms from this time till his death, in the latter end of November, in the same year. He derived some relief from loss of blood and spare diet, but he was not disposed to attend very strictly to medical regimen. A seton was applied over the trachea, from which he experienced some feeling of ease, as he always complained of pain in the region of the larynx. The manner of his death was very sudden. He had attended to his affairs, and went to bed in his usual health. Suddenly he awoke, and said he felt sick; raised himself in the bed, vomited some blood, and instantly expired.

Examination of the Body.—Decomposition commencing. A considerable quantity of coagulated blood escaped from the mouth. There was a great thickness of fat covering the abdominal muscles. A great quantity of fat in the omentum, and covering the pericardium. A very small quantity of bloody serum in each sac of the pleura. The left lung not at all adherent. The right universally so, but there was no recent mischief. The membrane lining the larynx and the trachea was very deep-coloured, and somewhat thickened. This was also the case generally with the mucous membrane lining the bronchia and air-cells. There was no pus, mucus, or blood, in the air-tubes. The right lung was not more than half its usual size; it was of a very dark-liver colour; it was not at all permeable to air, and evidently had not been so for some time; it was, in short, completely hepatized. The left lung was not diseased at all, but there was considerable gravitation of its fluids to the posterior part, and it was rather soft. The heart was much larger than natural, its texture very soft, and its right cavities very much dilated; no disease of its valves. On passing the finger from the left ventricle to the aorta, the inner membrane of this artery was found lined with bony matter, thin and spiculous. The whole arch of the aorta was found very much dilated, and entirely lined with the same kind of ossific matter. This dilatation of the artery evidently pressed on the windpipe just before its bifurcation. The œsophagus was also implicated in it. Adhesion had taken place between it and the dilated artery, and by ulceration, a small communication was brought about between the arch of the aorta and the œsophagus. In this manner blood passed from the aorta into the stomach, which contained at least three pounds of blood. The heart, and the large arch of the aorta, contained no blood. The internal membrane of the stomach and œsophagus healthy. The liver was softer than natural, or rather a pale colour. Intestines and spleen healthy. The capacity of the thorax small, compared with the general size of the body. The abdominal contents were of a very unusually large size. The trunk was large, and particularly well formed.

Observations on the Case.—As respects the state of the lungs in this singular case, it may be observed that the bronchial inflammation, by long continuance, was, in the right lung, complicated with inflammation of the cellular membrane, which had proceeded to complete hepatization. On the left lung no such complication had taken place. The state of the heart was that which, in many instances of protracted bronchial inflammation occurs, viz., general dilatation of its cavities, particularly those on the right side of the heart. But the prominent feature of this case was the disease of the aorta, and the curious modification of the symptoms caused by it. The loss of voice, which during life had been referred to a primary affection of the trachea, was evidently referrable to the pressure of this enlarged vessel upon the membranous part of the windpipe, by which its calibre was diminished, and, in the end, incipient ulceration occasioned.

Lyssa.*—I shall now bring forward a case which fell under my own observation, though not my practice, as it affords a specimen of unadulterated and unsophisticated lyssa, and also of two new methods of treatment; and, especially, of a manly bearing and fortitude in the patient without a parallel, which raised his mind above fear, and excluded the influence of prejudice. It exhibits the action of the rabid poison on *a man* in its true colours, without the mimicry of feigned symptoms, or those aggravations of terror which too often lash and goad the unhappy patient into frenzy and madness. On the 7th of August, in the evening, —— Millward, an athletic labourer, of middle age, from a state of perfect health, felt himself unwell, with a sense of weight and lebetude in one of his arms. On the 8th, he was affected with spasms of the larynx and pharynx, so as to swallow and breathe with difficulty. On the 9th, he was seen by several professional gentlemen, and it was not till then that he recollected that he had been bitten by a dog more than three months before. He was ordered to be bled, which was done to the amount of 24 oz., and then to have 4 grains of opium, mixed in 24 oz. of tepid water, injected into a vein, which was done, and he was also ordered to take liquoris plumbi acetatis ℥xx, every other hour. I was invited to visit him in the afternoon of the tenth; he was standing on the floor of his kitchen when I entered it; his countenance on fire with the inexpressible character of lyssa, and panting and puffing, almost strangled by the impulse of the air on the opening of the door, which he entreated might be shut. I desired him to try to swallow some milk, which he said he should be thankful to do, if he could, as his throat was burning hot, and he was very thirsty. He said he had no pain, yet the spasms affecting his breath recurred every two or three minutes, and whensoever he attempted to swallow, it required almost super-human courage to muster up resolution to attempt it, on account of the spasms. Yet he tried, drew himself up, opened his mouth while one tablespoonful of milk was injected by a syringe into the fauces, which he swallowed with such difficulty as to threaten the worst consequences; nevertheless, with undaunted spirit he persevered, and we got down half a pint of milk during the hour I stayed with him. His pulse ranged from 160 to 200, small, unequal, and almost uncountable, from tremors. After each of the spasms, his mouth was full of frothy saliva, which he spat freely about. He was bathed in perspiration. Every fibre of his body quivered with tremor, and when the spasms supervened, impeded anhelation threatened instant dissolution. His countenance was *torve* and fiery red, and the cellular texture about his eyes and his neck was much swelled by the labour of respiration and deglutition. He was neither delirious nor furious, nor under the influence of any illusion or fear, except slightly wandering near the close. He manfully exerted himself to do what was deemed advisable, and swallowed milk to the last. He died six hours afterwards, at seven in the evening, at the moment a dose of acetate of lead was injected into his fauces. The body was examined the next day. No discoloration was observable in the œsophagus. The pharynx was somewhat redder than usual, as were the glottis and the epiglottis. The stomach was covered with black mucus, in stripes, which continued throughout the jejunum and ileum, and they were all injected as by inflammation. The brain and spinal marrow were apparently sound, and no serum was effused in the ventricles. The other parts seemed healthy.

This case is fertile both in reflection and inference. We have two new remedies tried; we have bleeding, and all in vain, and vain I fear will be all attempts when the poison has seized the vital parts, as it obviously had in this patient, before any professional person saw him. Had the part bitten been cut out on the 7th, would it have availed? The event proved that the venom, sufficient to destroy life, had been inserted by the bite. In every case there is this doubt, and therefore in every one would I remove the bed in which the poison is deposited; most assuredly I would have extirpated the bitten part on the 7th. When the spasm supervened on the 8th, the venom had taken effect, and all the ulterior symptoms were merely the dying process. Of the ultimate effect of transfusion into the circulation, we have so little modern experience, and ancient experience is so much against it, that I should not dare to hazard the trial. In regard to acetate of lead, I do not affirm that it altered the symptoms of the complaint during life, but in point of fact, in Millward's case, it offered the only indication of disease on dissection. Such is the light of anatomy! In another respect, this case is amply illustrative. Millward had no fear of water or fluids; he had no objection to the sight, but to the effect, of them; he could not swallow any thing without extreme difficulty, and therefore was obliged to *manage* the swallowing them. He wanted fluid to allay thirst, and

* The term hydrophobia is not a character of the disease, and therefore gives a wrong bias to the judgment. I shall therefore take the liberty of substituting that of *Lyssa*, which has the advantage of ancient application in its favour, being used by Aretæus.

therefore made strenuous endeavours, and even struggled against death itself to swallow—but he had unusual courage and spirit—in ten thousand we shall seldom find such another. Perhaps his imagination and courage were exalted and heightened; in no other respect was he altered in intellect. He was not furious during any part of his disorder, and very little delirious at the last. So much, indeed, was he under the control of right reason, that he died in the very act of obeying one of the injunctions of his medical adviser. He was poisoned, and not mad.—*Dr. John Johnstone of Birmingham. Art. Lyssa.*

Infrequency of Lyssa.—In 80 years' practice, that is, from the time of my father's beginning until now, May 20, 1830, (in which period we have probably seen among us, 400,000 sick persons,) seven cases only have fallen under the observation of my father, my brothers, and myself, and of these we had only one each under our own immediate care. In the Birmingham hospital, established fifty years, 112,725 patients have been admitted, and among them there has been only one case of lyssa. On these data, the average occurrence of lyssa is one in 120,000 cases.—*Ib.*

Vacillation of the Iris.—The iris has been said to vacillate, in consequence of a want of support, thus, if the anterior chamber be unusually large, the lens absorbed, or the vitreous humour lessened in quantity or diminished in density, the iris may be expected to assume that action called vaccillation, quivering backward and forward as the movement of the body may direct it, uninfluenced, as regards the steadiness of its motion, by its own natural contractions. Having frequently seen this unsteady action of the iris follow an injury, which has produced the formation and absorption of cataract, and at the same time torn either the sclerotica or iris; and observed it succeed reratonyxis, or the posterior operation of solution when the iris has been wounded, or the sclerotic punctured in the situation of one of the ciliary nerves; and, having known patients so affected, who have never met with any injury to the eye, nor discovered any defect of vision, nor required the aid of spectacles; and having also observed it even when the pupil has been closed, where no want of support could be presumed to exist; and, on the contrary, having known this symptom wanting in cases of extraction, where the lens, and a large quantity of the vitreous humour, have escaped, and also generally when this operation has been well performed, the iris not being injured either by the operation or the passage of the lens; and having also remarked it much more commonly follow the posterior operation of solution than extraction, I am induced to believe that the notions commonly entertained upon this subject are erroneous. I believe vacillation of the iris to occur as the product of sympathy or irritation, or some injury to the lenticular ganglion, or other part of the nervous apparatus of the iris; and that it can, in no instance, be fairly alone referred to a want of that support which it has been said to receive from the posterior contents of the globe. The membrane of the aqueous humour, which covers the front and back surface of the iris, appears not only to be subservient to the purposes of secretion and absorption, but to render the same support to the iris as fascia afford to muscles. I am induced to allude particularly to this circumstance, from having remarked a vaccillating condition of the irides in a palsied individual, whose eyes were, in other respects, perfect, and who had neither received any accident, nor undergone any operation, in either organ; and from having occasionally noticed the same occurrence after the posterior operation of solution, where only a portion of the cataract, too small to deprive the iris of any appreciable amount of support, had been absorbed, where, it is presumed, one of the ciliary nerves had been in some way injured. My respected friend, Mr. Wickenden, has related to me the following particulars, as noticed in the eyes of an intimate acquaintance. A gentleman, rather advanced in life, has been slightly palsied for some years, and has a vaccillating state of iris, although vision, considering his age, is remarkably strong; he has met with no accident, and has been the subject of no operation to either eye; he has never worn spectacles, and is neither far nor near sighted. I cannot learn whether or not this condition of iris existed prior to the general affection of the muscular system; nor can I ascertain how far it has increased with the progression of the more important malady. This subject is one well worthy investigation, but I shall content myself with this cursory notice, in the hope of drawing towards it the attention of others, until a more intimate acquaintance with cases of this description enables me to enter upon minuter details.—*Mr. Middlemore's Report.*

Oleum Terebinthinæ in Diseases of the Eye.—*Case* 1.—James Brown, ætat. 24, admitted June 20th, 1830; last April was attending at the Royal Westminster Ophthalmic Hospital, with iritis of the right eye, which was speedily cured by the oil of turpentine. He had gonorrhœa at the time, but the discharge from the urethra ceased soon after the eye became inflamed,

and has not appeared since. His left eye is now attacked by the same complaint; says, that it has been inflamed for the last three days, accompanied with pain and dimness of sight. The iris is discoloured, pupil slightly irregular and dilated, and there is a bright zone of pink vessels round the cornea. The other tunics remain comparatively healthy. Complains of severe pain round the orbit, and slight intolerance of light; sight very dim. *Habeat, ol. terebinthinæ, ʒi ter die.* June 23d.—Pain much relieved. Inflammation and dimness of sight, however, remain as before. Has taken the medicine regularly, without any uneasiness in the urinary organs. Ordered to continue the turpentine. 24th.—Not so well. Circumorbital pain worse. Conjunctiva and sclerotica more inflamed, and pupil more irregular. Complains of slight strangury. To continue the turpentine, but to drink plentifully of linseed tea. To lose also twelve ounces of blood from his left temple. 26th.—Much the same. Pain and inflammation not relieved by the cupping. To take a drachm of the turpentine four times a-day. July 3d.—Has taken his medicine regularly, with the precaution of drinking plentifully of linseed tea, and has not experienced the slightest strangury. He may now be considered as cured, only a slight tinge of redness of the sclerotica remaining. The pupil is regular, and acts freely. He says, that he suffers no pain, and that his sight is completely restored. As the turpentine gives him no inconvenience, he is directed to continue it a day or two longer.

Case 2. Jane Spittle, æt. 36, was admitted May 18th, having syphilitic iritis of the right eye, accompanied with sore throat, and eruptions on the skin. She was ordered a pill composed of three grains of calomel, and a quarter of a grain of opium, three times a day. Had not applied here again until now, June 29th, and says that she had only taken four pills when her face became very much swollen, and she was confined to her bed for three weeks, suffering under a dreadful salivation, from which she has not yet quite recovered. Her eye and throat, however, gradually got well during that period. She has now returned with a similar attack of inflammation of the left eye, which has been gradually getting worse for the last week. She complains of the most acute pain over the brow, and extending down that side of the face, so intolerable at night that she cannot sleep. The conjunctiva and sclerotica are very much inflamed, leaving, however, a very distinct white line round the margin of the cornea; iris much darker than natural; pupil of the same size as the other, but rather irregular and fixed. Cornea remains clear. The lids are rather swollen and inflamed. Three days back, to relieve the pain, she was cupped, and took a drachm of the vinum colchici at night, but without benefit. She complains also of great weakness with sickness and loss of appetite; pulse quick, small; bowels confined. *Habeat pulvi. jalap. comp.* ʒi. *statim. Capiat. ol. terebinth.* ʒi. *ter die, et pulv. ipecac. comp. gr. x. nocte.* July 1st. Inflammation continues much the same. Pain however has been much less severe at night. To continue the medicines. 3rd. Says that she suffered more pain last night, and attributes it to not taking her medicines yesterday, the turpentine having caused a good deal of nausea and strangury, bowels very much confined. To continue the turpentine, and drink plentifully of linseed tea. *Sumat. pulv. jalap. comp.* ʒiss. *statim.* 6th. Much better. Inflammation considerably diminished. Very little pain now at night. *Rep. med.* 8th. Nearly well, very little redness remaining, pupil rather small but regular. Says that she is quite free from pain, and her sight very much improved. *Rep. med.*; *applicetur empl. bellad. tempori sinistro.* 13. The eye appears perfectly healthy. She is to continue the medicine, however, a few days more, as her sight is not quite so distinct as it was.—*Med. and Surg. Journ.*

Case of Hernia of the Brain. (*By Dr. Pierquin.—Journal des Progres.*)—Rose ——, aged 26 years, of a lymphatic temperament, feeble constitution, small stature, with blue eyes, and light hair, was a servant in Romans, in the department of Drôme. When France was invaded by the enemy, the little town of Romans suffered greatly from the brutality of the soldiery. Some women were violated, among whom was the subject of this case. A short time after the attempt upon her person, Rose observed a white discharge, the existence of which she was afraid to communicate to any one. Her health grew worse daily, until at length she became a prey to constitutional syphilis. After having suffered the most excruciating, deep-seated and cephalalgic pains, she entered the hospital, at which time she had a venereal caries about the middle portion of the cranium. All the remedies usually employed in similar cases proved ineffectual. The caries increased daily, and the sanies discharged from it was so fetid, that the patient suffered almost as much from it as from the disease. All the senses were unimpaired except that of smelling, and it could not be ascertained whether this resulted from the progress made by the disease, or from the odour of the discharge. It was in this desperate situation she was sent to the General Hospital at Montpellier, which she entered in 1821. The case, considered as the consequence of caries from a

neglected venereal affection, offered in itself nothing highly interesting, but it was different when viewed in relation to its bearing upon the physiology of ideology. We at first endeavoured to ascertain the influence of the external air upon the circulation. During the evening we counted 120 pulsations, and from 98 to 100 during sleep. This number was varied by the agreeable or disagreeable nature of the dreams, as was ascertained upon the patient's waking: under the two last circumstances, the protrusion of the cerebral pulp became stronger, whilst it did not exist at all in undisturbed sleep. The first of these phenomena took place equally whilst awake, just as if, in the generation or conception of ideas, the brain was struck with a state of orgasm, approaching a genuine erection. During quiet sleep the cerebral subsidence was such, that the organ seemed to repose upon itself, at which time the encephalic pulp withdrew entirely from the lips of the wound. Often at the dressing hour, the patient was not yet awake, and it became necessary to rouse her from ordinary long and sound sleep; the difficulty attending the passage from this cerebral inertia to activity, was marked by such a state of orgasm, that it became necessary at each dressing to take off a considerable portion of the pulp of the brain; an operation always unattended with pain, and unperceived by the patient, who seemed to suffer from it neither moral nor physical inconvenience. So many observations were doubtless sufficient to prove that the brain is the ideologic centre. But in addition to these, we very often subjected the patient to another conclusive experiment. Whilst placed on her seat during the dressing, we entered into a conversation upon some topic that might fix her attention. The moment she became engaged, the oscillatory movements of the brain became at once more rapid and stronger: pressure was now applied upon the brain as strongly as possible, and in an instant the patient lost the use of all her senses, could no longer form an idea, ceased to speak, terminating the conversation suddenly in the middle of a word, which she finished when we removed the compression. The same phenomena took place with regard to conversation commenced, the patient completing the phrase when we ceased to press upon the ideologic organ. These different experiments were not only unattended with the slightest pain, but were unknown to the patient, who never perceived the interruption to her intellectual existence, which we occasioned at pleasure.

From this curious case, we may conclude that the brain is the central organ of the sensations, and that without it there would be neither attention, perception, nor memory.—*Med. and Phy. Jour.*

CONTAGIOUS NATURE OF PUERPERAL FEVER.—Another interesting question arises, whether it be of an infectious nature? And, if so, by what means the contagion is conveyed from the one to the other? The information I have obtained from my own experience, and from that of others, appears to turn the scale in favour of the opinions of those who believe that the disease may be carried from one to another; but I strongly suspect that contact with the genitals is the method by which it is conveyed. A very strong argument in favour of this opinion is the fact that, although I visited seven or eight times in the day various puerperal patients, who were labouring under, and in fact dying from, this fever, in no single instance was it communicated to my private patients. It should be remembered that in very few instances was the *delivery* conducted by myself, and therefore there was no necessity for my making any vaginal examinations; and, in most of the dissections after death, I avoided, as much as possible, coming into actual contact with the diseased parts.—*Mr. Waller's Rep. on Midwifery. Ib.*

OBSTETRIC SOCIETY.

To the Editor of THE LANCET.

Sir,—In the last Number of THE LANCET I observe a letter bearing my signature, and purporting to be a copy of a letter addressed by me to the "Yellow Journal." No letter such as you have published was ever written by me, nor did I ever in addressing any communication to any medical work, style that work the "Yellow Journal." The production which you have put forth with my signature, is a gross and impudent forgery; and I call upon you to insert this *verbatim* in your next Number, as a contradiction to your statement; and at the same time to make a public apology to me for the unwarrantable use you have made of my name.

I am, Sir, your obedient Servant,
FRANCIS H. RAMSBOTHAM, M.D.
14, New Broad Street,
Aug. 9th, 1830.

[Did Dr. Ramsbotham ever see a puddle in a storm? We shall instruct our "transcriber of journals," not again to meddle with the Doctor's grammar, and instead of giving a *point* to his productions, to leave them pointless. The angry Doctor, we hope, will excuse us for saving a few sharp things upon his obstetrical society shortly.—ED. L.]

THE LANCET.

London, Saturday, August 14, 1830.

England may fairly boast of the number of her charities, and in no respect is the benevolence of our countrymen more strongly marked, than in the enormous funds and splendid institutions which are everywhere appropriated to the relief of the necessitous sick poor. Feeling, alone, however, would appear to move the promoters of medical charities, for while these institutions exhibit exalted monuments of the most pure and generous compassion, they furnish very lamentable examples of a want of knowledge and sound judgment. In a word, they present pictures of extraordinary mismanagement, and are amongst the most unfortunate instances of human folly. When a hospital is to be founded, or a dispensary "got up," the public ear is stunned with boisterous anticipations of the benefits which must result to medical science from its establishment. The starving poor are to be fed, the diseased are to be cured, the craving appetite of the anxious student is to be glutted with knowledge, the neighbouring surgeons from having the daily opportunity of witnessing complicated diseases within the walls of the hospital, are to shed the benign influence of their experience over the suffering inhabitants of the surrounding country. Thus it is held out to the rich, that their contributions from being bestowed upon the poor, will at last prove tributary to their own health and happiness. The flood-gates of charity are opened, golden streams flow from a thousand sources, the building is raised, the officers are elected, a committee is chosen, the patients are admitted,—And what next? Why, this liberal institution, this temple of compassion, assumes, externally, the appearance of a prison; it is barricadoed like a jail, and at each door is planted a Cerberus. Does this base abandonment of the principles avowed in the addresses which solicited the subscriptions, attract the notice of the benevolent subscribers? No! The institution is converted into a pent-up house of darkness, and not a word in the shape of remonstrance is heard. The cheering food intended for the starving poor is gorged by intriguing committees and sensual governors; the officers who ought to be chosen from amongst the most competent, are selected from the knavish and sottish companions of the committee; the downy couch which was to sooth the anguish of the afflicted, is converted into the bed of Procrustes, upon which the craving vulture Disease preys with increased fury, or the friendly hand of a "nevey" or a "noodle" lets loose the stream of life, and thus expires the "grateful object" of inconsiderate "charity." The generality of persons who contribute to the support of our hospitals, appear to believe that their only duty consists in throwing a certain sum of money into the hospital fund. They bestow their alms, we firmly believe, in perfect single-heartedness, with unmixed purity of purpose. But would not a little reflection teach them, that the money which they benevolently give, may be fraudulently applied? Even if they were to form an opinion from their own conduct, would not that conduct instruct them to believe, that as those governors who have bestowed their alms merely from compassionate motives, take, for the most part, no share in the management of their institutions, the government and control must necessarily be left in the hands of persons who have swelled the funds of the charity with far different intentions,—persons who have not "compassion" at heart, but who are employing the machinery of the hospital as a means of pushing their own interests?—who by jobbing, and intrigue, are employed in securing to their relatives and dependants, the various offices, and whose competency to execute the duties, is the last thing to be considered. Shame

on the idle and thoughtless subscribers! They augment the evils which they intend to subvert. It is their duty to see with their own eyes, that the funds are properly appropriated, that the officers are chosen by ballot from amongst the most competent, and that the prescribed conditions upon which the funds were raised are fulfilled to the letter. In a word, that their charities should not be converted into mutilating man-traps, should not become the dark arenas of hole-and-corner butchery, but that in every instance, without fee or reward of any kind, their doors should be thrown open, under proper regulations, to Students, to Practitioners, and to the Press. To Students,—that they may learn their profession, and thus render them capable of conferring its benefits upon others. To Practitioners,—that their presence may check the daring and ruthless hand of the experimentalizing and ignorant operator. To the Press,—that the skilful and successful practitioner may receive his due meed of approbation, and full measure of public reward; that the unfeeling trifler with human life may be known, shunned, and execrated; and that the refreshing fruits of experience, wherever gathered, may be distributed, without distinction, to the cultivators of medical science in all parts of the world.

We have been led to make these remarks, in consequence of what has recently been passing at the Derby Infirmary. It appears, that the medical men of the town, have, until lately, been entirely prohibited by the Governors from witnessing the practice of that Institution. But, by a more recent regulation, they may see the operations when their presence is not deemed "inconvenient" by the operator. This regulation must work queerly enough. The attendance of persons who are capable of deciding upon the merits and demerits of an operation, acts always as a most salutary check upon the movements of the rash and ignorant operator. To him, therefore, the presence of the town surgeons, or of the "outs," will always prove extremely "inconvenient." On the other hand, the skilful and dexterous operator is solicitous of a crowd, as he knows that he shall deserve, and receive, the applause of the spectators; hence, he courts publicity. The great advantage resulting from such scientific exhibitions must be widely diffused, and it is upon this ground that we have invariably demanded that our hospitals, infirmaries, and dispensaries, should be open to the profession, without restraint. The qualifying regulation, therefore, of the Committee of the Derby Infirmary, is calculated to effect *some* good. But why stop half way? Why show a greater desire for a distant contingent advantage, than for immediate security? Let the governors ask themselves what must be the situation of that patient who is submitted to the knife of an operator to whom the presence of qualified surgeons is "inconvenient?" Can the probable fate of so unfortunate a creature be contemplated without feelings of horror? If a surgeon have not *nerve* enough to operate in the presence of persons who are competent to decide upon his skill, how came such a creature in his office? Not, we are quite certain, by means of open competition, and public examination. But the principles of government sanctioned in the Derby Infirmary, are liberal when compared with those which obtain in the generality of country hospitals, from which, for the most part, "neighbouring practitioners" are entirely, and peremptorily, excluded. This gross abuse has been of long continuance; it has, therefore, the sanction of custom, of some standing, for its support; but it is an evil of so much magnitude, is attended with such fatal effects to patients, and is so obnoxious to the advancement of medical science, that we hope all who are not interested in its continuance, will unite to accomplish its destruction. The qualified "Outs" are surely a match for the incompetent "Ins."

The Edinburgh Medical and Surgical Journal, for July, 1830.

We have just concluded the perusal of an unusually tedious number of this publication. In the remarks we may make, we shall only notice the first and last divisions it embraces, namely, the original communications and medical intelligence. Of the first, collectively, it is impossible to advance an opinion, so discordant in quality are the materials of which it is composed; in the selection of the last, rather more judgment is displayed, especially in the department of medical jurisprudence and medico-legal analysis.

A quarterly report from the new Edinburgh Surgical Hospital, contributed for the fourth time, by the talented Mr. Syme, forms the van of the first division; as usual, it is concise, practical, and scientific, and affords ample evidence of the unwearied and liberal energy which that gentleman applies to the support of his infant establishment. By many, we are aware, his exertions are viewed through a jaundiced and envious medium, and we have more than once seen the sneer of detraction encouraged at his expense, but this we trust Mr. Syme will have the manliness to despise, and the perseverance to controvert. We gladly avail ourselves of the opportunity to recommend this hospital to the notice of the surgical student, affording, as it does, abundant opportunities for witnessing operations performed with the utmost skill, and explained with the most instructive precision. He will there have the satisfaction of seeing patients treated with humanity and skill, and will himself receive clinical instruction of the most valuable kind, totally free from official impertinence and disgusting grimace.

Of the cases and observations in Mr. Syme's paper we shall only notice the following: the first relates to a new method of treating indolent ulcers, recommended by Mr. Syme, and of which he speaks in the following terms:

"It will be seen from the list of cases, that a very great number of ulcers have been treated at the hospital. In a former report, I entered very fully into the consideration of those which are usually styled callous or indolent, and which constitute a very large proportion of the ulcers that are met with in the lower orders. Some have attempted to depreciate the new treatment by blisters, which I have proposed for this sort of ulcer, not on the ground of its inefficiency, but because it will not prevent a recurrence of the disease. - - - - The question that concerns us is, What means are most effectual and speedy for promoting the healing of indolent ulcers? When there is much swelling of the limb, when the edges of the ulcers are deep and callous, and when the constitution of the patient is not particularly irritable, the effect of a blister is quite astonishing; in three days, or sometimes less, the surface of the ulcer is much diminished in extent, and on a level with the surrounding skin; cicatrization then commences, and rapidly extends, and completes the cure much more quickly than I have ever seen it accomplished, even by the most careful execution of Mr. Baynton's method, which of all the others that have hitherto been recommended, is certainly the most efficacious."

The following case we beg leave respectfully to recommend to the notice of the "operatives" at Guy's.

"*Lithotomy.*—Mr. M. ætat. 60, came from Berwickshire to town, in the beginning of April, on account of stone in the bladder, from the symptoms of which he had suffered to an excessive degree for several years. His sufferings were unusually constant and severe. - - - - When he arrived, I certainly considered him a most unfavourable subject for the operation. He was excessively corpulent, his tongue was red and dry, and his thirst constant. In performing the operation, the first difficulty encountered was presented by the unwieldiness of the patient, whose limbs could by no means be approximated so as to admit of being secured in the usual way. Having cut into the bladder, I extracted two small stones and two large ones,—the size and shape of pigeon's eggs. In order to ascertain if any more still remained, I searched carefully with a curved staff, and finding it striking against another behind the pubes, I endeavoured to perform extraction with straight and curved forceps. But the extreme thickness of the parts, and the consequent depth of the wound, prevented me from depressing the handles of the instruments sufficiently to lay hold of the stone, or indeed even to touch it; and some attempts to dislodge it by means of curved scoops having proved equally unsuccessful, I resolved, though no advocate for the operation 'en deux temps,' to postpone any further proceedings for removal until there was reason to suppose that the stone had shifted into a more favourable position."

Two days afterwards, Mr. Syme removed the tube from the wound, and again searched unsuccessfully for the stone, but on the fourth day from the incision he extracted it with perfect ease. Mark what follows: "*The patient made a good recovery, and was walking abroad on the fourteenth day after the operation. He has returned home perfectly well.*"

By a tabular statement of cases treated for the past year, it appears, that 1900 cases of surgical diseases have been presented for relief; that 265 of these have been admitted into the house, and that 95 operations have been performed.

The second article contributed by Dr. Jas. Gregory, is on the diagnosis of the diseases of the lungs and pleura. What, save the utter poverty of matter, could have induced the editors to give insertion to such a production, we are utterly perplexed to discover; and, on the other hand, we are equally at fault in our search after Dr. Gregory's motive, in appending his veritable name to such a mass of superfluous composition. Had he but signed himself "A Stethoscope," and sent his unwieldy MS. to the Excrescence, there would have been charity at least in the act, and his primitive dulness would not be readily detected amid the Boeotian gloom of the surrounding contributions; but treading as he does in the present case, on the footsteps of Mr. Syme, his darkness becomes too visible to escape observation. There are many reasons for publishing; an author may write for pecuniary reward, to oblige an unfortunate and needy editor, or to acquire fame by novelty, or communicate the results of his experience on matters of disputed character; but of all these reasons for writing, the second alone appears applicable in the present instance, for so genuine a specimen of useless pedantry, we have seldom or never perused, as Dr. Gregory's communication. According to the established custom of all injudicious writers, he sets out with a truly Corinthian introduction, which for its grace and beauty we shall place before our readers. "Pathologists and medical writers, in all ages, have felt, and many of them have acknowledged, the difficulty of establishing an accurate diagnosis in the various diseases of the lungs and pleura." 'O quantum difficile est curare morbos pulmonum! O quanto difficilius eosdem cognoscere; et de iis certum dare præsagium! Fallunt vel peritissimos, ac ipsos medicinæ principes,' *are the words of Baglivi.*" From this elaborate passage, a just idea may be formed of the manner of the whole.

As for the matter of this article, a sufficient estimate of it may be founded on the following abstract: he declares, 1st, his intention of noticing the objections brought forward against the use of the stethoscope; 2dly, of reviewing the character and value of the evidence it affords; and, 3dly, he promises to point out the amount of diagnostic information it furnishes in the most important diseases of the lungs and pleura. Under the first head he consumes five tedious pages with the refutation of objections which every well-informed practitioner has already canvassed and decided on, such as its being a modern discovery, of difficult acquirement, &c. Under this head, in short, he does not make a single remark which we have not either heard or read before, times without number. Next, proceeding to review the character of the evidence afforded by the stethoscope, he occupies two pages with a description of the instrument, and the mode of its application; informs us gravely, that it is necessary to "weigh carefully the evidence afforded by the ordinary and functional symptoms, along with that of auscultation and percussion, before hazarding any decided opinion as to the diagnosis in doubtful cases of morbid action within the chest." How grateful should be the readers of the blue journal for this novel and important information!

From the circumstance of Dr. Gregory's boasted tutelage by Laennec, and the six years' stethoscopic experience he proclaims in a foot-note, we were led to anticipate something valuable in the third division of his subject, but again were disappointed, and we looked without success for a single valuable practical remark, or an original idea. On the whole, we are compelled to observe, that a more thoroughly useless article never found its way into a journal of the slightest reputation. We sought in vain through it for any traces of the master-hand so visible in the edition of Cullen's First Lines, with which Dr. Gregory was connected. In comparing that work with

the paper now before us, we can scarcely form any other conclusion than that they are the manufacture of two very different artists,—the difficulties of the former having been confided to the one, and the mere manual execution performed by the other.

The third article is by Dr. Harty, of Dublin, on the efficacy of mercurial purgatives in purpura; and though rather unnecessarily prolonged, is possessed of some practical interest; as it is not completed in the present number, our observations on it shall be brief. He relates three cases tending to establish the efficacy of the plan of treating the disease alluded to in the title of the paper. In the first case, a child twelve years old, the purpura was very extensive, of a dark-purple colour, inclining to black; appetite good; bowels costive; skin cool; pulsation rather wiry. An active purgative was given; viz. three grains of calomel, twenty of rhubarb, and an enema. On the following day the hæmorrhagic disposition was rather increased; pulsation higher; heat greater. Dr. Harty now "having every confidence in mercurial purgatives," directed three grains of calomel, six of rhubarb, nine of scammony, and this prescription he repeated with a due cathartic effect for five days, when slight ptyalism was induced, the petechiæ nearly vanished, and the fæces and urine were restored to their natural condition.

On this case Dr. Harty remarks, "Can reasonable doubt be entertained that its rapid and favourable termination is fairly attributable to the treatment?" Certainly, none; but, at the same time, it may remain very uncertain how far the recovery was connected with mercurial action. At any rate, taking the age of the patient into consideration, the other purgatives were amply sufficient to excite a considerable cathartic effect, quite enough, in all probability, to conquer the disease, without any mercury at all.

In the second case it appears Dr. Harty was consulted by a practitioner (a Dun we suppose) who had bungled away at his patient for seven weeks. Dr. Harty gives the case rather inconsiderately in the author's words, and a pretty specimen of case-taking it is. The patient was a girl, ætat. six years and four months. "In August last she was attacked by jaundice, not in a severe degree, which gave way in about three weeks to calomel and purgatives. She was completely restored by taking the raw yolk of an egg in the morning, fasting, for about a month." (Who can be stupid enough to deny the doctrine of signatures after this?) The purpura appeared in December, while the girl, in other respects, apparently enjoyed good health, and it was immediately treated by calomel and purgatives, *bark* and *sulphuric acid*. This system was persevered in till pneumonic inflammation and a rheumatic attack supervened, indicating, as the narrator cleverly remarks, the propriety of discontinuing the remedies, and adopting the antiphlogistic line of treatment. Well, did he bleed his patient? No. Did he blister her? No. Did he give her tartar emetic? No. What then? He directed *occasional* doses of calomel and sulphate of magnesia, and fancying he obtained some benefit from this line of treatment, he set vigorously to work, and purged away "as frequently as the bowels could bear it without acute pain." In the course of seven weeks, "five days was the longest interval without copious purging, and frequently it was produced every second day," till at last great debility and emaciation ensued, the purpura, wonderful to relate, remaining "*in statu quo*." Under these circumstances Dr. Harty was written to, and, in his reply, the treatment is, of course, condemned as "injudicious." Dr. Harty deprecates the use of the bark and sulphuric acid, condemns also the violent system of purging pursued, and recommends a milder system of laxative medicine, associated with calomel, or the blue pill. Under this treatment she eventually recovered.

The third case is given at considerable length; we have not space to quote it in detail, but we are strongly disposed to question the propriety of Dr. Harty's treatment, in the following particular, namely, the administration of *active purgatives* when the patient was passing *bloody* stools. During the autumn of 1827 we witnessed several cases of purpura complicated with the epidemic dysentery which then raged with considerable violence; would Dr. Harty have used purgatives in these cases, or would he have prefered the treatment which was successfully adopted; viz., the administration of opium and the acetate of lead?

We look forward to the continuation of

Dr. Harty's paper with some interest, particularly since he promises an account of the Milbank Penitentiary disease, which he witnessed by order of the Home Secretary. In the mean time, if he sets any value on consultation fees, we would advise him never again to publish such a case as that he received from his distinguished correspondent.

We shall for the present pass over the intervening papers, reserving our remarks on them for a subsequent occasion, and proceed at once to an elaborate communication by Dr. Sharpey "On a peculiar motion excited in fluids by the surfaces of animals." Though altogether out of place, and rather too replete with the pompous nomenclature of natural history, it still contains some curious food for speculation. "During some experiments," he informs us, "instituted on the tadpole, being desirous of ascertaining the dimensions of the globules of the blood at this period, I happened to cut off one of the external gills, as the readiest mode of obtaining my object, and laid it on a glass micrometer, with a drop of water; on viewing it then with a lens, my attention was attracted by a very singular and unlooked-for appearance. The globules of blood, which had escaped from the cut part of the gill, were moved rapidly along its surface towards the points of the branches in a constant and uniform manner. On further inspection I satisfied myself that the globules were entirely passive in this phenomenon, and that other light particles brought near to the surface of the gill were moved in a similar manner, this motion being manifestly owing to a current produced in the water along the the surface of the gill in a determinate direction." Further on, Dr. Sharpey remarks, "Whatever might be the cause which more immediately gave rise to these currents, it appeared to me that the purpose for which they were intended was, to effect a renewal of the water on the respiratory surfaces."

We have repeated many of Dr. Sharpey's experiments, and in most have observed the phenomenon he so accurately describes; we have, however, seen similar currents produced along the surfaces of *totally inanimate objects*, and in a determined direction, usually corresponding with the plane of the surface employed, and evidently analogous to, if not identical with, the atomic motions which have excited such general attention, described by Mr. Brown. According to the observations of this distinguished philosopher, the minute particles of all kinds of matter, when separate from each other, are in a state of perpetual motion; thus, pounded glass, or the dust of the streets, when viewed through sufficiently powerful glasses, is seen to traverse to and fro with unceasing activity. At present we can only notice another circumstance, which may perhaps be remotely connected with the facts Dr. Sharpey describes; some globular hydatids obtained from the liver of a sheep, having been placed in water, currents were produced, and after a short time the water increased in specific gravity, and the motions ceased. On opening the hydatids they were found full of a liquor of equal tenacity with the liquid in which they had been immersed, while some which had not been placed in water, contained a mucilaginous fluid. Might not this have depended on the action of the same law which Dutrochet has so admirably exemplified in his experiments on membranous transudation, or as he terms it, endosmose and exosmose?

An Account of the Varieties in the Arterial System of the Human Body. By P. H. Green, A.B., M.B., Trinity College Dublin. Illustrated by Plates. Dublin, J. M. Deckie, 1830. 8vo. pp. 59.

However desirable a work of this kind in a surgical point of view, and however great may be the talents and information of its author, we are fully convinced that it is quite impossible to do any thing like justice to the subject in thirty-two octavo pages, and we were therefore prepared, in the present instance, to find as many, or even more, omissions and imperfections, than we have actually met with. Of a book of this kind, under any circumstances, it is useless to attempt an analysis; almost every page, or every paragraph, must necessarily be distinct from the rest, and the whole is calculated, not for a single perusal, but for repeated reference or attentive study. All that remains for us therefore is, to give the general character of the work, and to point out its chief excellencies and principal defects. It appears to us, then, that Mr. Green is a good

anatomist, and that he has studied this particular subject with some diligence, but he is far from expressing himself with clearness and precision, qualities almost indispensable in a work of descriptive anatomy; and, probably, from the brief limits he has assigned to himself, he has too slightly noticed some important points, and passed over others altogether; the former is the case with regard to the epigastric, obturator, and internal pudic arteries; and, with regard to the latter, we may state, that the passage of the subclavian between the trachea and œsophagus, the superficial course of the posterior tibial, the origin of the vertebral and inferior thyroid by a common trunk, are not at all mentioned, and it is very probable that there are many other omissions, which our memory will not serve us to detect. In speaking of the brachial artery, the author says, "Bidloo met with the high bifurcation so frequently, that he considered it as the regular mode of distribution; yet Camper, a distinguished continental anatomist, denies the fact, and quotes, but erroneously, Haller, in support of his opinion." Here, in the first place, it is not very clear what fact Camper (to whom it is somewhat absurd to give such an epithet, as though his name were not sufficiently known to every tyro) denies, whether the high division is accidental, or whether it is the normal condition of the artery; and, in the second place, we may observe, that he does not erroneously quote Haller, for he only says, that this anatomist has made no mention of it; and, in truth, we have searched his description of the arteries in vain for any notice of the fact. Even such a trifling error as this ought to have been avoided in a work where the most rigorous accuracy is required; and the same may be said of some other slight errors, which, however, we do not think it necessary to notice. We cannot, however, pass over the following sentence:—"It has hitherto been supposed, that the holes in the transverse processes of the cervical vertebræ, were for the transmission of the vertebral artery, but I have ascertained that these holes exist when the vertebral artery enters high up in the neck." The inference here aimed at appears to us as absurd as though one should conclude that the scrotum is not intended to receive the testicles, because they sometimes do not descend into it, nor the flexors of the fingers to bend those organs, because they occasionally exist in individuals born without hands. Before concluding our observations, we cannot but notice the plates, which are as miserable performances as can well be imagined; in fact, each figure consists merely of two lines for the outlines of the limb, and two for those of each artery, so that, as no idea can be formed from them of the relative situation, connexion, &c., they cannot be half so useful as would be even an ordinary description.

LAMING'S TASTELESS CHELTENHAM SALTS.

The delusion and charlatanery, practised upon the people of this country, relative to mineral springs, have far surpassed every other description of quackery. The imposture of the "pump room" may not, indeed, have been so destructive to life as that of patent medicines, but, in the majority of instances, it is, we believe, far more costly. The benefits pretended to have been derived from drinking "the waters," are now universally acknowledged to result from change of air, scene, and early rising; and the salts drunk at the mouth of the "natural" spring, produce, in the abstract, the same benefit, whether swallowed in London or at Cheltenham; for it is well known, that the earths and minerals extracted from the "natural" springs at Cheltenham and elsewhere, have been most unnaturally conveyed from London to those favoured fountains of Hygeia, in certain wagons, carts, and vans, and plunged into the bosom of the inspired waters. That there are natural mineral springs, we do not deny; neither do we deny that their aperient and tonic qualities have proved of essential service in many chronic diseases; but we utterly disclaim the boundless commendations which have been so thoughtlessly and so basely bestowed upon their medicinal virtues. One half of these "natural springs" is merely solutions of salts purchased in London; and it is rather too much to require an invalid, who may have been reduced to want by his infirmities, to visit Cheltenham for the purpose of taking a few doses of aperients, at an expense of many pounds, when he

might drink them with equal effect at Hampstead or Croydon by an outlay of a few pence. With a view to lessen the tide of folly which has so long overflowed the "pump rooms," and in order to discover an agreeable and harmless aperient for those refined palates and injudicious heads, which may be disposed to appeal from the science and discretion of a regular practitioner, to the quackery and humbug of mineral spas, we have carefully examined "Laming's Tasteless Cheltenham Salts," both as to their chemical and medicinal relations, and we may observe with much satisfaction, that the solution formed by them while in a state of effervescence, is particularly agreeable to the taste, and also highly efficacious as an aperient. It is not a patent medicine, it is not a quack medicine, and Mr. Laming, we believe, pretends to no secret method of preparation. At all events we are no encouragers of secrets in matters that are calculated to mitigate the sufferings of mankind, and therefore we have no hesitation in saying, that by the appropriate reagents, we find in the solution, *sulphate of soda*, *tartrate of soda*, *tartrate of potash*, and *supercarbonate of iron*. From this proximate analysis, the therapeutic value of the preparation may be readily estimated. On reference to any standard analysis, it will be seen that Laming's salt differs from the true Cheltenham, in containing no muriate of magnesia, and in other particulars of less consequence. This defect, however, is counterbalanced by the substitution of tartrates, and the consequent absence of the disagreeable taste which the muriate of magnesia would unavoidably occasion.

LONDON UNIVERSITY.

To the Editor of THE LANCET.

SIR,—Lest it should appear that there is any want of honesty and openness in my conduct, I beg you to state, unequivocally, that I furnished you with the pamphlet relating to Mr. Granville Sharp Pattison. Do, I entreat you, make every effort to let this notice be published with the "Correspondence;" by doing which, you will materially oblige your obedient servant,

ALEX. THOMSON, M.B.

University Dispensary.

[This note reached us too late to be inserted in the body of our last Number.—ED. L.]

FRENCH MEDICAL STUDENTS.

JUST as our Number was going to press, we received the following letter. We beg to express our unqualified approbation of the suggestion it contains; for, surely, too much respect cannot be shown to the noble-minded and intrepid Parisian students, who, although undisciplined, so valiantly fought, bled, and conquered, in the cause of liberty. The meeting ought to be held in a medical theatre—the largest that can be found, and the Council of the London University would feel pleasure, we should think, in lending their Theatre of Anatomy for the praiseworthy purpose. With regard to the time, it had better be delayed, probably until the first week in October, when our medical pupils will have returned to the hospitals and class-rooms. It is a meeting at which every English student should be present.

To the Editor of THE LANCET.

SIR,—Considering the spirit of confraternity which unites the liberal medical men of this country to those of France, and the generosity with which the institutions of the French are thrown open to men of all nations; considering, too, that the School of Medicine, as well as the *Ecole Polytechnique* and the *Ecole de Droit*, have ever been in the foremost rank, despite of every kind of persecution, in the defence of freedom and justice; it seems to me that some particular expression of our admiration is due to the gallant children of science, for their conduct in the late hard struggle between liberty and despotism.

I have more than once stood with them against pointed bayonets, and the applause showered down on the laurels I won on the field of science, have made me well acquainted with their noble nature.

The gentlemen who have done me the honour to attend my lectures in Aldersgate Street, I am proud to say, participate in my sentiments, and will all come forward.

The only question is (you can best answer it), When, where, and how, shall a meeting take place?

T. KING,

Un Ancien Interne de l'Hotel Dieu, and Lecturer on Anatomy and Surgery.

10, Hanover St., Hanover Sq., Aug 12.

"INDICATIONS OF INSANITY."

JOHN CONOLLY, "Professor of the *Nature* and Treatment of Diseases," has written a letter, printed it, and caused it to be circulated amongst some eighteen or twenty of the corruptionists, in which he has thought proper to "indicate" that, in our review of his book, there were misquotations and misrepresentations. John *indicates*, and indicates *only*, for he has not attempted to prove, by a single quotation, that we have been guilty of either the one or the other of these grave charges. John should be cautious in bringing charges; this is not the first time, and things are getting to a pretty pass, if a man like John Conolly, who, with two others to help him, could not conduct a monthly medical publication so as to pay the expenses of paper and printing, is to be permitted to "indicate" to a reviewer of THE LANCET the manner in which he should discharge his duty. John Conolly is still the same man. If he have got a new seat in the University, it is not to be presumed that the Council has given him a new head. But the unfortunate author and editor is, we hope, a more successful lecturer. By the way, we should have thought better of John's sincerity in the cause of 'insane reformation,' if he had published his work while he held office in a country lunatic asylum; then he might have done some good, but there, if report speak truly, instead of "indicating" to his professional brethren, and "comparing" with his patients, he referred the chief of his matters to the office of the active and obliging matron.

As he has printed his letter, we think proper to give it publicity.

To NOBODY.

SIR,—I beg leave to avail myself of your pages, in order to expose a piece of *critical* disingenuousness on the part of a cotemporary publication, by which the interests of others may be more affected than my own.

In a work which I recently presumed to offer to the profession, I undertook to point out some most grievous errors which prevail in the practice of medical men, with respect to persons deemed to be lunatics. My observations were designed to show that insane persons are not sufficiently protected by the existing regulations and practice; that many persons are most improperly confined, and some as improperly left without restraint; that every eccentric man is actually in danger of being treated as a madman, whenever any selfish purpose can be answered by it; and that the general treatment of lunatics is so indiscriminate as often to be detrimental, and not unfrequently to be cruel.

Conceiving that these practical errors were founded on erroneous opinions, which were very generally received, I entered into an inquiry concerning the real indications and characters of insanity, as distinguished from the various weaknesses, inequalities, and peculiarities, exhibited by various minds in various circumstances. This inquiry was, I hope, not unbecomingly conducted, or presumptuously concluded; although I am well aware that any consideration of this kind is unimportant, compared with that of the correctness of my allegations, and the utility of the suggestions and rules of practice which were appended to them. It is to the portion of *my* work entitled *Application of the Inquiry to the Duties of Medical Men, when consulted concerning the state of a patient's mind*, that I am chiefly anxious that those who do me the honour to look into my publication should pay some attention. If that portion contains what is reasonable and practicable, I will most willingly leave the rest of my book to be judged of by the very few who may have time or inclination to peruse the whole of it.

In two papers published in THE LANCET, and falsely denominated a review of my work, the portion of it which is now spoken of—the practical portion of it—is not noticed or alluded to. An attempt of mine to explain in what insanity differs from sound mind, is misrepresented. Assertions are made for me which are not to be found in my book; and a confusion of terms and ideas, originating in the haste and impatience of the critic, is ascribed to the author. The illustrations given, in the application of my inquiry to practice, of the mistakes committed in legal and medical investigations, and all considerations relating to the means of avoiding them, are as much kept out of view as if I had passed them over in silence.

With the amiable motives by which the writer of the review seems to avow that he has been governed, I have nothing to do. Those who publish their opinions, or whose duties call upon them to act in public, must expect animadversion; and I am more anxious not to deserve it than to escape it when undeserved. My appeal is against the unfairness of the critic, not against the unhappy passions of the man.

The only questions which entitle me to make any appeal at all, are these:—Are not the interests, and even the personal se-

curity, of many individuals, endangered by the mistaken views of insanity yet prevalent? And are the suggestions and rules which I have laid down for the guidance of medical practitioners, likely to protect patients from improper confinement, and practitioners from the mistakes and exposures which from time to time have occupied so much of public attention?

Society has an interest in the first of these questions, by whomsoever agitated. I leave the second to the decision of my professional brethren, from whose enlightened judgment and sense of duty I yet hope for a great and most beneficial reform, in a much-neglected department of practice.

I am, Sir,

Your very obedient servant,

J. Conolly.

August 3, 1830.

TO Dr. JAMES JOHNSTONE.

My dear James,

Although I have been one of your familiars for many years past, I am compelled, even now, to confess my ignorance of the letters which compose your name. Is it *Johnson*, or *Johnstone*? I inquire for two reasons; first, because I perceive that The Lancet invariably calls you *Johnstone*, and secondly, because the profession should not remain in ignorance of so important a matter connected with one of its greatest characters. You are an exalted man, a man of renown, an analytical, honourable, and learned, reviewer; you are remarkable also for your consistency in medical politics; in a word, your name will figure to the end of time in medical history; it is even now a valuable species of public property. Ought we not, then, to be well acquainted with its etymology. In all that concerns The Lancet, you have shown a spirit of inquiry and a laborious industry, which are highly commendable. It shall be my business, or, rather, my amusement, to investigate many matters concerning *you*, and the manner in which I shall perform my duty will entitle me to your gratitude, and procure for me the thanks of the profession, and the approbation of The Lancet. The sentimental German cook, like an ass as he was, whined while he was preparing a luxurious dish for the feast; whined,—the ninny,—while flaying the eels. Knowing your worth, my dear James, and knowing also how desirous you are that the hidden treasures of your character should be exposed to public view, the process of denuding will neither demand, nor receive, a tear from me. The poor eels twisted with torture under the operation, and at last found relief in the sting of the frying-pan. In dishing up you, my dear Johnstone, there will be no pang at all. You solicit the process, well knowing the gratification that will be derived from the high relish of the treat. But to commence *de novo*, let us have your real, your baptismal, name. Tell us also the place that gave you birth; it *ought* to be immortalized. A friend informs me that you told him your name *was* "Johnstone," but that you had altered it to "Johnson." That you commenced by nipping off the *e*, and finished by deleting the *t*, and that you did this because the Irish aspect of your cognomen was obnoxious to your sight. You are a native, I believe, of Carrickfergus, and this alleged alteration that you have made in your name, has induced some of your enemies to say that you are base enough to be ashamed of the country that gave you birth. These things distress me deeply; pray explain them, and believe me to be,

Yours most faithfully,

Castigator.

August, 1830.

P. S. The printer not having seen any of my writing for a long time, committed a few errors in setting up the MS. of my last. For "lines," bottom of first col. p. 702, read, "lions;" same place, put a full point after the word notice; and in second col. p. 703, for "I was done," read, "I was dumb."

DERBY INFIRMARY.

It is said, that the physic expenditure at our infirmary has grievously increased since the appointment of a third physician, although there has been no increase in the number of patients; we have been told (but cannot believe it) that the physic bill is now going on at the rate of 400*l.* per annum, (capital thing for the druggists), and that almost daily changes are made in the medicines, so that it is the amusement of some of the patients to keep an account of the number of times their physic has been changed, and of the quantity they are *expected* to take in a given time. Observations of this kind are heard daily—"I have been under my doctor thirteen weeks;—he has changed my stuff three-and-twenty times, and I am worse than when he began with me." Others say, "Your doctor does all his jobs with drugs, but ours works a deal 'by steam.'" In consequence of these repeated alterations the governors have been informed that gallons of discarded mixtures, and thousands of discontinued pills and boluses, have been constantly turned into the river.

Even the fishermen are alarmed, and say

that "the physic, and the gas, will kill all the fish; none will come to our nets." It is suspected that these finny out-patients swallow almost as much as the bipeds.*

The interests of the druggists have been also promoted of late, by the administration of the most costly articles in the materia medica. Musk at forty shillings an ounce, has been given to in and to out patients! Is it not either a very *old*, or a very *novel* practice to administer *musk* to patients who have not much amiss with them? Are its medical virtues such that there is no substitute for it? If its beneficial effects are as great as its price, why do we hear so little of its administration? Are the members of the medical profession ignorant of its pre-eminent virtues? The phosphorus doctor is perhaps experimenting again. Is all this sanctioned by "The Expense Committee" which was forming some months ago?

The governors also complain of the increase in the consumption of wine; and the following report has recently crept forth from the Infirmary; what the next will be we cannot tell, but expectation is alive:—

Mary Fletcher, aged 22 years, was admitted into The Derbyshire General Infirmary on the 7th of May last, by Dr. Baker (the junior physician), as a case of *fever*, and died in eighteen days after her admission; during which period she was *troubled* with *strong delirium*, with a sluggish state of the bowels, which were mostly constipated; with a bladder of cold water on her head, and (*à la française*) with blisters to the calves of her legs; with a glass of port-wine every two hours, and, towards the finale, with six ounces of sherry a day, and with many abscesses on her belly, of which "the doctor" was not aware during her life, as he had not been lucky in his examinations by "the touch" as on other occasions. This is a case worthy of observation, as it has afforded the profession an opportunity of witnessing the effects of "the old phlogistic plan of treatment," discarded almost half a century ago!

The body was not opened, as "the doctor" did not wish any unfair advantage to be taken by observations in print, as on a late occasion. N.B. We have been informed it is in agitation to keep "the doctor's" case-book under lock and key, past occurrences having rendered this disagreeable "hole-and-corner" measure absolutely necessary! We understand the other case books are not yet *closed*; but the senior surgeon has earnestly requested the governors to pass a law to prevent the publication of his cases in The Lancet, which he said had been done with malicious intentions; it is supposed he alluded more especially to the recent case which he called "strangulated femoral hernia," in which a very queer and fatal operation was performed.

Since putting these notes on paper, the weekly board of governors has requested the medical officers to investigate the cause of the great increase in the expenditure of physic. Accordingly, a report was drawn up and read at the board on the last Monday; and in the course of the discussion Mr. Wright, the second surgeon to the Infirmary, said, "I wish what I am about to say, to be thoroughly understood to have no personal or invidious allusion to Dr. Baker, but the statements having been made to me by my apprentice in the dispensary of this Infirmary, I think the board should be made acquainted with the same, as we are now trying to find out the cause of the great increase in the druggist's bills which has taken place without any increase in the number of patients, either in or out, on whom the physic is expended."

The circumstances are these; that Dr. Baker has eighteen in-patients, that he changed the medicine for twelve of them on Thursday, for ten on Saturday, for eight on Tuesday, and for nine on Wednesday or Thursday! These are not the exact numbers, but they are sufficiently correct for our purpose.

Dr. Baker being present, he said the remark of Mr. Wright was excessively invidious, and he did not understand why he should be arraigned thus, and spoke of throwing himself on the mercy of the board. Mr. Wright was only discharging his duty to the institution, as one of the medical board, and as a governor; and his conduct is generally considered in this point of view.

This affair took place on Monday the 19th of last month (July), and the board postponed the further investigation of the question till the next board; but on Tuesday morning, July 20th, Mr. Wright received a challenge from Dr. Baker, by the hands of Captain Storey, a gentleman of this town. But the Captain says that Dr. Baker deceived him by withholding a material part of "the truth." The Captain adds, that had Dr. Baker told him the whole at first, he should not have had anything to do in the affair. So the concern blew over, as a case of challenge without good cause. It is said,

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* See Dr. Elliotson's Clinical Lecture, in The Lancet of June 19th, 1830, page 445: "Depend upon it, whenever a host of various medicines are prescribed in succession, the practitioner has not made a good diagnosis, nor well weighed the indications and means, but is floundering about in uncertainty, without much chance of hitting upon the proper means, or any chance of giving it fair-play, if he have found it."

however, that Dr. Baker has been so continually teased and harassed, at and about the Infirmary, that he was driven to "this act," in order to prevent his being troubled in future. Thus the Derby crows are to be frightened by the smell of gunpowder. Dr. Baker, since Mr. Wright's statement, has scarcely changed the medicines at all.—Hurrah for the patients!

X.

August 1, 1830.

HOTEL DIEU.

LACERATION OF THE PERICARDIUM, AND SUPERFICIAL WOUND OF THE HEART BY A FRAGMENT OF THE STERNUM.

F. Manuet, ætat. 41, of robust health, was forcibly pushed against a wall by the shaft of a cart; he was immediately carried to the Hotel Dieu, and found to be in the following state:—His respiration was laborious, and very short; the sternum was fractured at the junction of its two upper thirds, while the lower and the upper fragments were forcibly pushed inwards. The third rib of the right side, at a few inches distance from its sternal extremity, offered a firm angular prominence, which the patient stated was the consequence of a fracture he had had in his youth. The fourth, fifth, and sixth ribs, at four inches distance from the sternum, were strongly depressed, and exhibited distinct crepitation; besides these lesions, there was a violent contusion of the right foot, and of the outer side of the leg. No fracture of the ribs of the left side could be discovered. The patient's countenance was very pale, expressive of much distress, and covered with cold sweat; he could hardly speak; the pulse was almost imperceptible, and the skin cold. After a few hours, the pulse having risen, he was bled, and had a bandage rather tightly applied round the chest. There was no hæmoptysis, but extreme dyspnœa, which continued and increased so as to require the removal of the bandage; he was obliged constantly to sit up, had not a moment's sleep, &c. On the following morning, emphysema was found to have taken place around the fractures, and a large swelling had formed over the fractured ribs and at the sternum, extending from its lower extremity to the region of the fracture. This swelling always subsided during expiration, and might be obliterated by very slight pressure. M. Sanson applied a spirituous lotion over the sternum, with compresses, so as to maintain the fragments in situ. On the right side of the chest, very distinct "gargouillement" was heard with the stethoscope. On the fourth day, a rather unexpected reaction was observed to take place, the dyspnœa suddenly increased, the face became flushed, &c. After copious bleedings, these symptoms subsided; from this period, however, periodical fits of extreme dyspnœa occurred, so that it was again found necessary to remove the bandage. After venesection, the patient always felt alight, but transitory relief. The swelling over the fractures had now rather subsided; the fracture of the sternum exhibited a deep depression; the fragments of the ribs had rather been raised up; a large and very dark-coloured ecchymosis had formed from the right leg up to the chest. The right side of the thorax appeared to be rather fuller than the left, and had a dull sound on percussion. The right hypochondrium was tense and prominent; there was no cough nor expectoration; the tongue was yellow and dry; the thirst violent, and the least exertion caused a fit of suffocation, in one of which he died, on the twelfth day after the accident.

On examining the body, the posterior surface of the sternum was found to adhere firmly to the pericardium, and its upper fragment was actually protruding into its cavity, so as to have caused a lacerated wound of the right ventricle, through nearly a third of its substance. No fluid was found in the pericardium, the internal surface of which was covered with false membranes; the heart was pale, and its substance very friable. The edges of the wound of the pericardium were firmly adherent to the fractured bone, so as to form a passage from the cavity of the pericardium to the fracture. A large quantity of blood was found extravasated in the cavity of the right pleura. The right lung was forcibly pushed backwards and upwards; its substance did not seem to have undergone any morbid alteration. The fourth, fifth, and sixth ribs were fractured, and their cartilages detached from the sternum. The peritoneum was much injected, and contained a large quantity of bloody serum, with flakes of albumen suspended in it.—*Repert. Génér. de Breschet.*

HYDROPHOBIA; INJECTION OF WATER.

C. D. ætat. 31, of a strong constitution, was some time ago bitten by a dog in the right foot; no attention was paid to the wound, which speedily healed. The dog having disappeared immediately after the accident, it could not be ascertained whether it was affected with rabies or not. On the 15th of July, about six weeks after the infliction of the bite, D. felt slightly indisposed, and complained of stiffness along the back; on the 16th and 17th he seemed to labour under great mental depression, and on the 18th became restless, and so agitated that it was feared he would become deli-

rions; he was bled, had leeches to the neck, and was ordered mucilaginous potions, which he took with some reluctance. Having been brought to the Hotel-Dieu on the 18th, at nine o'clock in the morning, he was soon afterwards seized with convulsions, and all the symptoms of hydrophobia; he violently pushed back all fluids and bright bodies, and struck at the persons around him, so that it was necessary to confine him with the strait-waistcoat. He talked much about his having been bitten by a dog, and earnestly entreated those who came near him to kill him. At half-past ten he began to spit around him; the secretion of saliva was very abundant, and continued to be so till the last moment of his life; it was white, viscous, and spumous; he used much effort to throw it off, and it frequently ran over his chin. He was also frequently seized with sickness and nausea, but without vomiting. MM. Petit, Caillard, and Bally, decided on the injection of warm water into the veins; and the operation was performed at eleven o'clock by B. Sanson. Above a pint of blood was previously taken, and between seven and eight ounces of warm water were injected. No accident took place during the operation, and the patient appeared to be somewhat more calm immediately after it. This improvement was, however, transitory; the convulsions speedily returned, and he died at about three o'clock, without much struggle.

The *post-mortem* examination offered nothing of interest. A few hours before death an emphysematous swelling had been observed at the anterior surface of the neck, and this was found to extend as far as into the mediastinum. The brain, cerebellum, spinal chord, and nearly all the principal nerves, were carefully examined, but did not exhibit any morbid alteration. The heart was flabby, pale, and empty. The larger vessels, and the veins of the arm, were healthy.—*Lanc. Franc.*

CONGENITAL DISLOCATION OF THE RADIUS.

A very curious preparation was shown at the amphitheatre of the Hôtel-Dieu in February last. It consisted of a dislocation of the head of the radius, in both arms. At least an inch of the upper extremity of the bone lay behind the humerus. No difference existed between the dislocations on either side, and they were probably congenital. M. Dupuytren remarked, that about twenty years ago he observed a similar case, which he thinks was also on both sides and congenital. A violent torsion of the arm inwards might, however, cause the dislocation in question.—*Journ. Univers. d. Sc. Med.*

LONDON UNIVERSITY.

PROFESSOR PATTISON.

To the Editor of THE LANCET.

SIR,—In the absence of my friend Professor Pattison, who is now at Paris, I have to request that you will give early insertion to the following brief quotation, from a pamphlet published by that gentleman ten years ago, in "refutation of certain calumnies" brought against him by Dr. Nathaniel Chapman, republished in your LANCET of last week. The entire pamphlet of Mr. Pattison furnishes, in my opinion, a most triumphant answer to *all* the charges brought against him by the American physician. But without the opportunity of consulting my friend, I shall content myself with a mere republication of the following document.

I have the honour to be, Sir,
Yours faithfully,
DAVID D. DAVIS,
Prof. of Midwifery in the University of London.

5, Fitzroy Square, August 9th, 1830.

"The last proof which I" (Professor Pattison) "shall adduce in refutation of the third charge, is one which seems to me conclusive. Prevented by the reasons already mentioned from entering into discussions of this disgusting affair in the present pamphlet, and with the view of entirely obviating the necessity of it, I requested the four following gentlemen, who, in rank, intelligence, and respectability, are inferior to none either in this or in any other country, to examine the documents in my possession relating to this transaction; pledging myself at the same time to publish in this, my defence, whatever they should afterwards say was their impression of my conduct in it, should it be in favour of, or against me.

"Robert Smith, Esq., late Secretary of State to the United States.
"The Rev. John M. Duncan.
"The eminent Counsellor at Law General W. H. Winder.
"The Honourable Judge Nisbet.

"I did not select my friends, for they might be partial. I did not fix on my colleagues, for they might feel disposed to support me against an attack so cruel and dishonourable. But I requested judges, to whom I was almost a perfect stranger, I begged them to consider me guilty, until I had proved to them that I was innocent. When I had gone over my documents, I requested them, if they did not consider the proofs of innocence such as no other evidence could possibly controvert, to call on Dr. Chapman to

produce every thing which he conceived would criminate me. They unanimously declared that they were satisfied that the charge made against me of an adulterous intercourse with Mrs. Ure, was wholly destitute of foundation, and expressed their readiness to sign any paper to that effect which I might desire. Accordingly the following certificate was made out and signed by them.

"CERTIFICATE.

"Being requested by Granville Sharp Pattison, Esq., Professor of Surgery in the University of Maryland, to examine a series of letters and documents relative to the causes of his coming to the United States, with the view of becoming Professor of Anatomy in the University of Pennsylvania; and also in relation to a charge made against him by Dr. Andrew Ure, of Glasgow, the undersigned examined said letters and documents, and are satisfied, first, that said letters and documents are genuine, and were written and made at the *time* and in the *manner* they respectively profess to be; and, 2dly, That the charge of adulterous intercourse between Mr. Pattison and Mrs. Ure, is wholly destitute of foundation.

(Signed) "R. SMITH.
"JOHN M. DUNCAN.
"W. H. WINDER.
"A. NISBET."

EXAMINATIONS AT EDINBURGH FOR THE DEGREE OF M.D.

To the Editor of THE LANCET.

SIR,—The example I gave in publishing the questions proposed to me, when a candidate for the degree of M.D. at Edinburgh in 1819, has, I find, by No. 362 of THE LANCET, been followed by a graduate of this year, Dr. Fosbroke. My reason, though unassigned at the time, was *single*, viz. to offer the means of comparison between the questions proposed to Cambridge candidates (see LANCET, 1827-8, Vol. II), and those of Edinburgh. Dr. Fosbroke avows a *double* motive, viz. to allow a comparison between the examinations of 1819 and 1830, *and* to afford instruction to future aspirants. I shall not attempt, but leave to more competent and impartial critics, the useful exercise of drawing up a *comparative view*; at the same time I would remark, that even should the result be in favour of a greater difficulty in the queries of 1830, yet that alone will not decide any superiority in the graduates of this year. That a more accurate estimate may be made, I will readily, if you deem it desirable, transmit to you the answers to my questions, &c., such exactly as they stand in my memorandum-book, in which they were entered at the time; and perhaps Dr. Fosbroke may also feel disposed to furnish similar additional grounds of comparison and instruction.

In my time, the usual period of examination was *one hour*, which time was frequently extended to an hour and a half, and even sometimes to two hours; the proficiency of the candidates being rated inversely to the time occupied. Now on reference, I find the number of my questions 140—time, *one hour*; Dr. Fosbroke's questions 117,—time *nearly two hours*.

I can hardly account for this, unless by supposing that the much-to-be-deprecated custom of holding the examinations in Latin continues, and that Dr. Fosbroke is not a very good Latinist; this of course is a gratuitous supposition, but it is the only explanation that suggests itself to me.

In the event of your thinking it desirable that our answers be also published, I hope you will add your request to mine, that Dr. Fosbroke will favour us with his. I am leaving town for a few weeks, and shall not be able, in case of your wishing the answers, to furnish them till my return.

I am, Sir,
Your obedient servant,
MEDICUS EDINENSIS.

[We do not see that any advantage could be derived from publishing the "answers," because, if correctly given, they are to be found, of course, in books which are in the possession of the generality of practitioners and students.—ED. L.]

DINNER TO THE PRINCIPAL, AND THE MEDICAL PROFESSORS, OF THE EDINBURGH UNIVERSITY.

ON Monday last, about fifty gentlemen who had received their Medical education at Edinburgh, took the opportunity of testifying their respect to their professors, by giving a dinner to the deputation now in London, which a few days ago presented an address to their Majesties on their accession to the throne.

Dr. Roget presided, and was supported by several eminent graduates of Edinburgh. The very Rev. Principal Baird, Professors Monro, Alison, and Ballingall, were present, and severally acknowledged the compliments paid by their pupils. The Principal made a very feeling reply to the Chairman's toast, "Prosperity to the University of Edinburgh," and produced a considerable impression by his elegant and feeling address.

After a variety of suitable toasts and speeches, the meeting separated at a late hour, every one much pleased with the arrangements, which, it is but justice to the Stewards to say, were of the first order.